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EDUCATIONAL SURVEYS

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[Advance Sheets from the Biennial Survey of Education
in the United States, 1924-1926]



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EDUCATIONAL SURVEYS

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I. HIGHER EDUCATIONAL SURVEYS, 1922-1924 AND 1924-1926.

By ARTHUR J. KLEIN

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NUMBER AND SCOPE OF SURVEYS

The higher educational surveys made during the two biennial periods 1922-1924, 1924-1926, were more varied in scope than those made in previous years. They included surveys of all State-supported institutions of higher learning in four States; all institutions of higher learning, State and privately endowed, in two States; a single State institution in one State; the Government-supported universities of the Philippines and Porto Rico; all the colleges in one State under the control of the Baptist Church; two privately supported institutions; and the higher educational institutions in Cleveland, Ohio. Eight of these surveys were conducted under the auspices of the Bureau of Education; in two others a member of the bureau staff served on the survey commission.

In State surveys the ends sought are nearly always the same; the State wishes to know if its institutions of higher learning are fulfilling to the greatest possible extent the purpose for which they were created. If they are not, it desires to know what can be done to increase their efficiency and their value to the State. But some surveys have presented other problems. In Massachusetts, for example, the question was chiefly one concerning the advisability of establishing a State university; in Tennessee an educational policy looking toward increased interest of its citizens in higher education was sought; in Cleveland, Ohio, a method for coordinating and developing a city's higher educational facilities to meet its future growth and needs was desired. But whatever the main purpose of the survey, the same sets of facts and conditions are studied and much the same means of dealing with specific problems are recommended.

Several important factors must inevitably be considered—the field or fields of the institutions, financial support, and methods of organization and administration. The ramifications of these factors are numerous and varied. In the study of the institutions it has been necessary to take into account their geographical, social, and economic setting; their relations to each other and to other parts of the educational system; their control; their internal organization; their standards of scholarship; the training, experience, loads, and salaries of their teaching staffs; their buildings, libraries, equipment; their present financial condition, and their future needs.

STANDARDIZED INQUIRY

If attention is centered upon details, the surveys reveal a considerable degree of standardized inquiry and provide an important body of information upon a wide range of the subjects with which administrative officers are concerned, such as degrees held by the various ranks of the staff, teaching schedules and loads, enrollments in different curricula, size of classes, fees, salaries, and institutional support. These are matters of survey routine and may or may not be related to the larger problems with which outside surveys are best fitted to deal. Many of these subjects should be and are becoming increasingly matters of current institutional record and interpretation. One survey, that of the University of Porto Rico,¹ recognizes clearly the relationship of these details to fundamental conditions and problems.

The university's past is now unimportant, except as a warning. Its present is clearly a stage of transition. Only its future is of real interest and significance to the people of Porto Rico. To analyze its present condition, with the fullness of detail that is common in studies of this character, would serve no useful purpose. For example, calculations of costs of instruction would mean little because they would necessarily be based on factors that will be radically changed within a year. Nevertheless, the commission is persuaded that some analysis by an outside agency of the fundamental operations of the university, some estimate of its equipment and personnel, and some definition of its major problems should be helpful to its officers in planning for the future. Such a study should also show the people of Porto Rico the disparity between the university they now have and a university that will perform those services for the island outlined in an earlier paragraph.

The importance of institutional collection and interpretation of facts concerning its problems is emphasized by the surveys of Utah² and Tennessee.³

¹ Survey of University of Porto Rico, conducted by Dr. S. P. Capen, included in Survey of Education in Porto Rico, made by International Institute of Teachers College, Columbia University, 1925.

² Survey of University of Utah, conducted by Dr. George F. Zook, included in Survey of Education in Utah, Bureau of Education Bulletin, 1926, No. 18.

³ Survey of Higher Education in Tennessee, 1924, conducted by Dr. George F. Zook.

The survey commission recommends that the University of Utah and the Agricultural College, upon the nomination of the presidents of the two institutions, employ a competent research and financial secretary, "to have charge of the business offices of the two institutions and to act as a continuing agency for the gathering of information and arranging it in form intelligible to lay members of the board and to the people of the State." A continuous self-survey of both institutions and of their relations would thus be insured. The survey of higher education in Tennessee proposes that a continuous study be made of the higher educational situation in the State and suggests that this might be undertaken by the Tennessee College Association. These studies might well be published in the form of a yearbook and form the basis for discussion at the annual meetings of the association.

ECONOMIC AND SOCIAL BACKGROUND

The surveys of higher education devote a surprisingly small amount of space to discussion of the geographical, social, and economic background of the colleges and universities studied. Information of this kind is frequently given without comment, but careful presentation of these conditions infrequently determines analysis of the scope and nature of institutional offerings, of support and of fields of service. Special attention to such relationship is worthy of comment, therefore.

University of Porto Rico.—The survey of the University of Porto Rico lays stress upon the possibilities of development inherent in the university's geographical location close to the capital city, in a center of industrial and cultural influences, and particularly its position midway between the two Americas and its consequent opportunity to promote cultural contacts between the two continents.

Berea College, Kentucky.—The unprinted report of a study of Berea College, Berea, Ky.,⁴ stresses particularly means for adapting the work of the institution to the needs of the mountain people who compose its student body. It recommends that the college gradually give up training in the elementary field and as much as possible the secondary field, and concentrate upon training which is best suited to prepare students to assume leadership in solving the social and economic problems of the mountain people. Emphasis is placed on the importance of offering such vocational work as tends to introduce better methods and greater production of natural resources. A general regulation requiring students in all divisions of the institution—normal school, foundation school, academy, and college—to take a minimum amount of work in vocational fields is suggested. In

⁴ Study of Berea College made by Dr. George F. Zook in October, 1924.

addition, courses that actually prepare the college students upon graduation to enter some vocation are recommended.

Utah.—The introductory chapter of the Survey of Education in Utah clearly relates the physical characteristics of the State, its resources, and the occupations of its people to its problems of education. The chapter on higher education attempts, perhaps somewhat less successfully, to utilize information concerning social and economic conditions as a basis for judgment and recommendation concerning the public and private colleges and universities of the State.

COORDINATION AND CONTROL

All the surveys give considerable weight to problems of educational coordination, to methods of control, and to the nature of support.

Discussion of coordination does not usually face squarely the basic problem of directing all the public and private higher educational resources of a community to the attainment of the common objective of meeting the needs and demands of the city, State, or other territorial unit to which institutions belong. Most frequently educational coordination as between State institutions is treated without reference to the private college factor in the higher education of the State, and studies of private institutions sometimes overemphasize, perhaps, competitive conditions rather than the function of contributing to a common community service. Surveys are authorized more frequently for the purpose of composing differences between institutions than for the purpose of initiating new constructive programs.

To settle disputes between two or more State institutions regarding the proper fields of each, the Bureau of Education has consistently recommended the application of the principle of major and service lines. When lack of coordination between institutions exists it has recommended a board to devise means of bringing about unity of purpose, or it has recommended the creation of a central board to govern the institutions. State surveys conducted by other agencies have followed the same general lines as have those by the Bureau of Education. The treatment of these problems by specific surveys is of interest and importance.

Kansas.—The commission making the Kansas survey⁶ found that, although the State university and the State agricultural college have developed considerable work in the same fields, what was once costly duplication has now become a necessity to meet the demands of their rapidly growing student bodies. Nevertheless, for the future development of the university and the agricultural college the commission

⁶ Survey of State Institutions of Higher Learning in Kansas, Bureau of Education Bulletin, 1923, No. 40.

recommends the field of work which should be undertaken by each as major and service lines, respectively.

The tendency of the normal schools of Kansas to devote their attention to the work of preparing teachers for the high schools rather than to what should be their chief function, that of preparing teachers for the elementary schools, is deprecated by the commission, not only because of the effect upon the elementary schools but because of the resulting competition with the other higher institutions of the State, involving additional expenditure of State funds and the entering of a field of work which belongs to the State university and the State agricultural college.

Recommendations of the commission concerning the teacher-training work of the State call for more emphasis on subject-matter preparation for elementary-school teachers; higher requirements for secondary-school certificates; confining of the normal schools to the granting of the degree of bachelor of science in education; and for the deferring of the establishment of a new normal school in Kansas until the standard of teacher preparation has been raised to such a point as to constitute an increased demand for teacher training at the normal schools.

The study was made at the request of the Kansas State Board of Administration, which had charge of the educational, penal, correctional, and charitable institutions of the State, numbering in all 27. This board consisted of four members, the governor, ex officio, and three members appointed by him, who devoted all of their time to the duties of the board and received therefor a compensation of \$3,500 a year each, their term of office being four years.

Against this board the survey commission directs certain criticisms and upon it bases the major recommendation of the report. Reiterating the standards for governing boards enunciated by the Bureau of Education in other surveys of higher educational institutions which it has conducted, the commission recommends that in so far as the powers of the State board of administration relate to the institutions of higher learning, the board be replaced by a non-paid board of from seven to nine persons, appointed by the governor, for terms of seven to nine years each.

Utah.—The conflicts between the State university and the State agricultural college, common in States in which the two institutions are under separate boards of control, are present in Utah and were responsible for the survey of education in the State made by the Bureau of Education in the spring of 1926.

The survey commission considered conflicts of interest between the two institutions with reference to arts and sciences, engineering, commerce, and business, home economics, teacher training, summer school, and extension, and indicated the extent of the activities in

each of these fields that should be undertaken by each institution. It was of the opinion, however, that overemphasis had been placed upon the amount of duplication that existed in the work of the two institutions. A lack of coordinated effort gave the impression of greater duplication than there really was.

A central board is the proposed remedy. The recommendation is for a "State board of higher education" of 10 members, including the State superintendent of public instruction, ex officio, appointed by the governor and confirmed by the senate, for a term of nine years, one member retiring each year and not eligible for reappointment during a period of three years, to take the place of the existing boards of the two institutions. In lieu of the State board of higher education, should the recommendation for a single board not be acceptable, the commission suggests that the composition of the separate boards be 10 members, including the State superintendent of public instruction, ex officio, as a member of both boards, the other members to be appointed by the governor for a term of nine years, one retiring each year.

Whether a single board is created or the two boards in the form suggested are retained, the commission urges that the basis for the geographical distribution of membership be the seven judicial districts of the State.

Other recommendations looking toward harmony between the two institutions are for the fixing of the fees for the university and the agricultural college upon the basis of credit hours, at the same rate; for the creation of a committee composed of representatives of the two institutions and a member of the proposed board of higher education, or of the State department of education, and reporting to the board, to coordinate and plan the extension work of the two institutions; and the hearty cooperation of the two institutions with the State department of education in the improvement of teacher training work and facilities.

Texas.—The most important matter in the report of the study of higher education in Texas* concerns the relations between the institutions of higher learning. There are 17 of these institutions in all, comprised in five units, each under a separate independent board—the State university and its two branches, the State agricultural and mechanical college and its three branches, the College of Industrial Arts, the Texas Technological College, and eight State teachers' colleges.

Some of these institutions, the report says, were "established . . . largely on political considerations." No agency for coordinating their activities existed. "Unless some such plan . . .

* Survey of Higher Education, included in Texas Educational Survey, directed by Dr. George A. Works, 1924-25.

be adopted," the report continues, "Texas can not hope to be spared a great deal of unnecessary expense and general educational anarchy among her institutions." It suggests a State board of higher education "to unify the State schools into a system of higher education."

This board, it believes, should be without administrative authority, which should continue to reside in the several existing boards. Its functions should be to—

make comparative studies concerning student enrollments, dormitory facilities, salaries, room space, libraries, and other features at the several institutions which will enable the board to arrive at sound conclusions relative to all major questions of educational policy; * * * approve or disapprove all new courses of study which it is proposed to introduce at any State institutions of higher education in the future; * * * approve or disapprove before presentation to the legislature all proposals to establish new State institutions of higher education; set up standards for all junior colleges which may be supported wholly or in part by the State, which standards must be met as a condition for State aid.

A board of approximately nine members, nominated by the governor and confirmed by the senate, serving for overlapping terms of nine years, is suggested.

The scheme of higher education (aside from teachers' colleges) which the commission proposes for the State specifies the place which each of the existing institutions should occupy in the system. In addition, it recommends a system of junior colleges, under a separate governing board—"probably the State board of education." It believes that school districts or cities with \$10,000,000 of taxable property and a high-school enrollment of not fewer than 400 should be permitted to establish junior colleges. To the support of these institutions it believes the State should contribute, upon the condition that adequate provision shall first be made for the support of the State institutions already existing.

The commission makes specific recommendations concerning the division of extension work among the institutions. The university is recommended as the center for all such activity except agricultural extension, which should be done by the agricultural college; home-economics extension, which should be done by the Texas College for Women (the new name which, because of the general character of its work, is recommended for the College of Industrial Arts); and local extension classes for teachers, which should be conducted by the teachers colleges.

Other important recommendations are for a State system of teacher training, which shall assign appropriate functions to each teachers' college; adoption of a definite plan for the training of rural teachers, the teachers' colleges being recommended for preference in this work; restriction of the several branches of engineering to institutions in which the number of students is sufficient to assure an annual grad-

uating class of approximately 20; more generous support for all the institutions of higher learning.

Indiana.—The Indiana survey¹ discovered little wastage of the State's funds through unnecessary duplication of courses within institutions and overlapping of work between them. Some duplication exists in the field of extension activities. The State needs, however, a unified program for higher education. To bring this about the commission passes by the idea of a central board of control as unnecessary, but suggests that prior to the meetings of the State budget committee meetings be held between the governor and representatives of the institutions to discuss the budgets of the institutions. If this is not carried out, consideration might well be given to a central board.

Other suggestions for bringing about unity of effort in higher education include the uniting in Indianapolis of the first year of medicine of Indiana University, now given at Bloomington, with the last three years now given at Indianapolis, and the removal to Indianapolis of the school of dentistry of Indiana University and the school of pharmacy of Purdue University, where these three divisions should be combined into a single unit. Transfer should also be made to Indianapolis of the schools of law and of commerce and finance of Indiana University. The commission suggests that the entire university might advantageously be removed to Indianapolis. The school of agriculture of Purdue University, the agricultural experiment station, and the extension division should be organized under a single head. The farm lands belonging to the school of agriculture and the experiment station should be consolidated. The extension activities of all the institutions should be developed as a unit.

The commission also recommended that municipalities be authorized to organize junior colleges, under the supervision of the State board of education, to relieve the State higher institutions of some of the burden of the first two college years, the funds of the institutions thereby released to be used for the advanced courses of the senior colleges and graduate schools.

Massachusetts.—The survey of higher and technical education in Massachusetts² was noteworthy, in that it eventuated in a recommendation to the general court that a State system of junior colleges be established.

Massachusetts is abundantly supplied with privately endowed colleges and universities of the first rank, but it supports no great

¹ A Survey of the State Institutions of Higher Learning in Indiana, directed by Prof. Floyd W. Reeves, 1926.

² Investigation Relative to Opportunities and Methods for Technical and Higher Education in the Commonwealth, directed by Dr. George F. Zook, 1923.

institution comparable to the great universities maintained at State expense by most of the other Commonwealths. The question of the need for increasing the facilities for public higher education in Massachusetts has several times engaged the attention of the general court. In 1915 the proposal for a State university was rejected in favor of a substitute proposal to create a department of university extension. With the passage of that legislation the matter rested until 1922, when the general court resolved—

That a commission of seven persons be appointed by the governor to inquire into and report upon the opportunities and provisions for technical and higher education within the Commonwealth; and the need of supplementing the same and the methods of doing so and whether said methods should include the establishment of a State university, or further cooperation on the part of the Commonwealth with existing institutions, or otherwise. * * *

The commission which the governor subsequently appointed decided that, in order to carry out the provisions of the resolve a thoroughgoing, scientific survey should be made which should include the educational opportunities offered by both the State and endowed institutions of the Commonwealth.

In its report the commission, after reviewing briefly the findings of the survey with respect to the "present opportunities and provisions for technical and higher education in the Commonwealth," and "considering some aspects of possible needs for additional opportunities and provisions," as revealed by the survey, concludes that "further opportunities and provisions are needed."

Suggesting that a study of the feasibility of establishing a system of State-controlled scholarships be carefully considered, and declaring that "while there is need for additional opportunities and provisions for technical and higher education, the need is not so great nor so urgent as to warrant the establishment of a State university," the commission reaches the conclusion that a State system of junior colleges will best meet the demands for additional higher educational facilities in Massachusetts and recommends that the general court authorize the establishment of such institutions.

The report of the fact-finding survey is voluminous. Every phase of education in Massachusetts, a study of which it seems could contribute to an understanding of the situation in the State with reference to higher education, receives consideration. An appendix containing 69 tables and charts furnishes a large body of supporting evidence.

As preliminary to the main study, the report contains brief reviews of the provisions for elementary and secondary education in Massachusetts; of the State's support of higher education; of general university and college conditions in the United States; and of conditions in the Commonwealth compared with those in other States.

Entrance requirements and practices at the universities, colleges, and normal schools of Massachusetts; the probability of success at college of high-school graduates who intend to go on to higher educational institutions, as revealed by the intelligence of seniors in the public high schools; the training of public high-school teachers; the facilities and opportunities for the higher education of young women; engineering education; business education of collegiate grade; technical and business education on the semiprofessional level; professional education; facilities and opportunities for research; university extension facilities; the State normal schools; the Massachusetts Agricultural College; and the Lowell Textile School constitute the main subjects for discussion of the remainder of the study.

Having presented the facts with reference to the existing opportunities for higher education in the Commonwealth, the report proceeds to discuss the several ways by means of which it might be possible for the State to increase these opportunities should it desire to do so.

The first suggestion is of a system of State scholarships. A constitutional barrier to State aid of this type, in the form of an anti-aid amendment being found, and it being pointed out, furthermore, that such a provision would not solve the problem of any lack of higher educational facilities in Massachusetts, a State system of junior colleges is considered.

The laws of several States in which recognition has been given through legislation to the junior college as part of the State's educational system are cited, particularly the California law, which "is the first attempt to provide anything resembling a state-wide system of junior colleges," the necessary features of which are—

that junior colleges shall be open to all residents of the State on the same or practically the same basis; that they shall be supported wholly or largely at State expense; that they shall be supervised by the State department of education as a condition for receiving State aid; and that they may be affiliated with the State university for the first two years of college work, on the one hand, and, on the other hand, may offer completion courses of study intended to meet the needs of the community or section of the State for vocational or semi-technical instruction beyond high-school graduation.

The report then outlines a plan for a State system of junior colleges "embodying the results of experience in other States and adhering as closely as possible to the educational practice of Massachusetts." The main provisions in the plan are that—

Any city or town having an assessed valuation of \$10,000,000 and an average attendance of 500 pupils in four-year courses of the public high schools may, with the approval of the State department of education, vote at any regular or special election to establish a junior college, provided, however, that there shall not be more than 12 such junior colleges approved by the department,

The city or town in which the junior college is located must provide suitable grounds, buildings, equipment, and all necessary expenses for support, subject to reimbursement by the Commonwealth. * * *

Each city or town maintaining a junior college, approved by the State department of education, shall be reimbursed annually by the Commonwealth for 90 per cent of its expenditures for salaries of all teachers and administrative officers, except superintendent of schools, in the junior college.

The report gives estimates of the cost of establishing and maintaining junior colleges, under the plan suggested, basing its figures on the cost of (1) buildings and equipment; (2) salaries of teachers and administrators; and (3) support other than teachers' salaries, for institutions of 200, 267, and 400 students, respectively.

In conclusion it is pointed out—

that the adoption of a state-wide system of junior colleges would not be a substitute for a State university. However, if perchance, any considerable number of the present privately controlled higher institutions in Massachusetts should adopt an unfriendly attitude toward the junior colleges, there would undoubtedly be a demand for a State university at which the four-year courses of study in liberal arts and sciences could be completed. Also, it should be realized that in the nature of the case junior colleges can do very little to relieve any demand there may be in Massachusetts for further facilities supported at State expense in professional curricula, such as medicine, law, dentistry, engineering, architecture, and teacher training. In other words, a State university may be as necessary to the complete success of a system of public junior colleges in Massachusetts as it is doubtless considered in such States as California, Texas, Minnesota, Missouri, Michigan, and Illinois, where junior colleges are an important part of the State's system of education.

Finally, the report discusses the probable expense of establishing a decentralized university with the existing State-supported higher institutions and perhaps a number of the institutions under private control as units, as compared to the cost of establishing a centralized institution built from the ground up. While the cost of a decentralized institution is impossible to estimate, it would doubtless be less than the cost of an entirely new institution. The cost of establishing and maintaining a State university of the centralized type is considered under three main divisions: (1) The initial outlay for lands, buildings, and equipment; (2) cost of operation and maintenance; (3) revenue requirements and possible sources of revenue. As a basis for the figures estimated under these respective divisions, two computations are made of possible enrollments at a State university in Massachusetts, based upon the general experience of State universities.

Tennessee.—Thirty-four institutions were included in the higher educational survey of Tennessee, 21 universities, 9 junior colleges, 2 independent schools of medicine, 1 independent school of law, and a teachers college. Five of the institutions are for negroes.

The problem to be solved, as the surveyors saw it, was the reason for the presence in Tennessee colleges and universities of so few Tennessee citizens, and the steps to be taken to develop more interest in higher education.

The solution of the problem, proposed by the survey committee, of increasing higher educational opportunities in the State does not contemplate the addition of new institutions of higher learning. On the other hand, the committee questions whether the number of existing institutions, in view of the small enrollments and restricted resources, is justified. But it suggests two methods by means of which college work in Tennessee might be strengthened: First, through the affiliation of weak denominational colleges with standard institutions. This could be accomplished by a church desiring to provide education of a certain type establishing in the immediate vicinity of a high-class institution a college which gives only a limited amount of work under its own faculty, the students taking their other work in the larger institution. Second, by placing all institutions of one denomination in the State under the control of a single board, which could combine the institutions into a well coordinated system and could work out a policy of economic development. If an attempt is made at coordination and affiliation the committee recommends for consideration the junior-college idea for at least seven of the four-year colleges. The institutions of the State might also arrive at some agreement among themselves as to the lines of training which they will attempt.

Baptist colleges of Tennessee.—In another Tennessee survey (not published), that of the Baptist colleges of Tennessee, is shown the lack of denominational policy in regard to the institutions which the denominations support, which has resulted in scattered effort and low standards. Attention is called to the very small proportion of Tennessee's population in college as compared to other States. The report commends the efforts of the Baptist board in employing an executive secretary to coordinate the work of the four Baptist colleges in the State and to promote the educational interests of the denomination.

The principal recommendations are that the colleges attempt to coordinate better the curricula accepted from the high schools with the curricula to which students are admitted in the colleges; that as soon as possible the preparatory departments of the colleges be abolished; that the Hall-Moody Normal School for the present confine its college work to one year; and that a definite amount be set aside annually by the executive committee of the State Baptist Convention for maintenance, payment of institutional debts, buildings, and increase of endowments of the four colleges.*

* Survey of the Baptist Colleges of Tennessee, conducted by Dr. George E. Zook, 1922.

Cleveland, Ohio.—The survey of higher education in Cleveland, Ohio, was an innovation in the field of higher educational surveying. It was the first time that the facilities for higher education offered by a city were studied for the purpose of outlining a method for coordinating and developing these facilities to the end that they might best serve the city's needs.¹⁰

The investigation concerned particularly ~~but two~~ institutions, the Western Reserve University and the Case School of Applied Science, the work in higher education undertaken by other institutions in the city not being sufficiently extensive to affect materially the situation.

The report shows the unprecedented demand for higher education in Cleveland because of the rapid growth in the population and the consequent increase in the number of high-school students who are seeking higher educational opportunities. It shows the percentage of increase in enrollments in Case School of Applied Science and Western Reserve University from 1910 to 1922 to be 92.2, as compared to an increase of 175.5 per cent at 10 representative privately controlled universities in the United States and 191.1 per cent increase at six representative State institutions located in urban centers. It further shows that the city of Cleveland is far below other large cities in the size of the higher educational load which it carries and that a very high proportion of its citizens go to colleges and universities outside its borders.

These facts reveal that increased opportunities for higher education in Cleveland are a necessity. In order to supply these opportunities the commission recommends the establishment of a great university, to be built upon the foundations already laid by Western Reserve University and Case School of Applied Science. It proposes a new university corporation to include these two institutions and other local institutions which might care to enter into the plan, the governing board of this corporation to be composed of 15 members, in part representatives of the cooperating institutions, and in part representatives at large, elected by those chosen by the boards of the constituent institutions, each member serving for approximately 10 years.

The powers and functions of the new board would not infringe upon those of the boards of the constituent institutions, which would continue exactly as at present. Each institution would control all its own assets, present and future; each would have charge of its expenditures; each would determine its own educational policies; each elect its own faculty and administrative officers according to its own rules and regulations (unless later they might choose to join

¹⁰ Survey of Higher Education in Cleveland, directed by Dr. George F. Zook, 1924.

in selecting the same head for the enlarged university). Each would elect members to the new university board in accordance with a plan agreed upon in advance.

The necessity of close cooperation between the administrative officials of the enlarged university and the constituent institutions is emphasized. To make this cooperation complete and effective the commission believes that ultimately there should be a single head for the enlarged university and its several divisions.

The enlarged university would perform such services as economy and sound educational practice dictate. Such functions include a central library, a central gynasium, the offices of university comptroller and registrar, care of buildings and grounds, etc. It would develop new lines of work which are interinstitutional in character or which have not been developed by the constituent institutions, such as business education, evening education, graduate work and research, teacher training, and the work of a new liberal arts division, to be known as "University College."

As outlined by the commission, the enlarged university would be composed of Case School of Applied Science, the several divisions of Western Reserve University, together with new units as follows: A university college for preprofessional students in certain four-year undergraduate technical curricula; a school of education; a school of business and civic administration; a division of evening education; a graduate school; a summer session; and bureaus of industrial and business research. Other educational or semieducational institutions not included in the survey might also be admitted to the university organization.

Two periods of development, 1924 to 1929 and 1924 to 1934, are selected for estimating the growth and the consequent financial needs of the enlarged university, which, with the exception of the medical, dental, and pharmacy schools, the commission recommends should be on an entirely new campus of 300 or more acres, easily accessible to all portions of the city.

University of Porto Rico.—The commission which surveyed the University of Porto Rico laid special stress upon the importance of transferring the College of Agriculture and Mechanic Arts from Mayaguez to Rio Piedras, the seat of the main division of the university. It sees two alternatives for the college in its present location. It must become an entirely separate self-governing institution, or an administrative officer with autocratic powers over both divisions of the university must be designated and set apart from either division.

Another transfer recommended involves the removal of the courses for rural teachers and eventually of the normal courses to Mayaguez and established as the teachers' college of the University of Porto

Rico, making use of the buildings at present occupied by the College of Agriculture and Mechanic Arts. The objections against maintaining a separate branch of the university are not present in the case of the teacher-training work. Facilities for practice teaching are lacking at San Juan; the academic preparation of the students in this branch of the university is different from that of the rest of the student body, resulting in a lack of homogeneity and a complication of the task of instruction; and the courses for training elementary teachers are largely professional, relatively inexpensive, and do not duplicate other university instruction.

Other recommendations include the development of closer relations with the departments of education, agriculture, and health, and the maintenance of the relation of the School of Tropical Medicine in cooperation with Columbia University, and the continuance of the Summer School of Spanish, as factors in the development of contacts between the North and South.

University of the Philippines.—The report of the survey of the University of the Philippines¹¹ stresses two major obstacles that have stood in the way of the development of the University of the Philippines—governmental interference and lack of sufficient financial support. Its principal recommendations are intended to relieve the situation produced by these obstacles.

As constituted at the time of the survey, the board of regents of the University of the Philippines was composed of the secretary of public instruction, the chairmen of the committees on education of the senate and house of representatives, the director of education, and the president of the university as ex officio members; two members elected by the alumni and five members appointed by the Governor General, by and with the advice of the Philippine Senate. The commission recommends that the two legislative members of the board be dropped and that there be retained as ex officio members only the secretary of public instruction, the director of education, and the president of the university. It recommends also the elimination of the representative of the university council, the retention of the two alumni members, and the addition to the five appointed members of four others. With these changes the board of regents would become a nonpolitical body, "with secure tenure and a real measure of certainty of administrative autonomy." However, "this reform would, of course, be futile unless the government ceases to regulate by statute those affairs of the university which, by statute, it has placed under the control of the board of regents."

¹¹ Survey of the University of the Philippines, conducted by Dr. S. P. Duggan, included in the Survey of Education in the Philippine Islands, made by the International Institute of Teachers Colleges, Columbia University, 1924.

The specific acts of the legislature which gave rise to the above comment of the commission were acts fixing a rigid salary scale for the faculty of the university and requiring the approval of the presiding officers of the two houses of the legislature and of the Governor General for the selection of a president and the employment of every teacher whose salary exceeds a certain amount; and an act of 1923 prohibiting the expenditure of university funds during that year for increases in the salaries either of the administrative or instructional staff.

The report calls attention to the improved situation of the university resulting from two recent acts of the legislature: An act of 1923 creating the office of chancellor of the university separate from that of commissioner, and an act of 1925 giving to the chancellor the power to appoint all officers of instruction and all other employees, subject only to the approval of the board of trustees.

The surveys of the North Carolina State College of Agriculture and Engineering¹² and of the University of Pennsylvania¹³ stress coordination within rather than between institutions.

North Carolina State College of Agriculture and Engineering.—In North Carolina the necessity for a change in the administrative organization of the college to meet the demands of an increased student body was the occasion for the survey.

The recommendations made involve a complete reorganization of the administrative system of the college. The most important include: (a) Centralization of all State-supported work in agriculture by the transfer of the control of the activities of the agricultural experiment station and the agricultural extension service to the board of trustees of the college, to be administered in cooperation with the work of resident teaching; (b) division of the administrative organization to include four major fields, each in direct charge of a dean: (1) Agriculture, (2) engineering, (3) general science, and (4) social science and business administration; (c) an advisory council to the president consisting of seven persons including the president, the dean of the college, the deans of the four major divisions, and an additional member selected from a list of three persons nominated by the general faculty.

University of Pennsylvania.—The survey of the University of Pennsylvania emphasizes the necessity for a strong central organization. To effect this the committee defines what should be the functions of the board of trustees, the president, the dean of student affairs, the finance officer, and the executive secretary. It recommends the creation of a university senate composed of "such a

¹² Conducted by Dr. George F. Zook, 1923.

¹³ Educational Survey of the University of Pennsylvania, conducted by Dr. Frederick J. Kelly.

faculty group as will best represent the faculties of all ranks, which should be responsible for formulating the university's policies with reference to the interschool aspects of courses of study, schedules, discipline, programs of research, etc., and should be advisory to the central university officers on all matters of general university policy"; the establishment of a graduate school committee to develop the research program of the university, and a committee of which the provost should be chairman, to consider the annual budget, including matters of appointments, salaries and promotions, and other matters that arise in connection with the budget.

SUPPORT FOR HIGHER EDUCATION

The increased cost of higher education, which during recent years has accompanied a constantly growing demand for education beyond the high school, has made the problem of support an important one with which all surveys must deal. Surveys made by the Bureau of Education are less inclined to meet this situation by recommending increased provision of income than by recommending increased coordination and internal efficiency in the expenditure of funds already available. This tendency reflects a high degree of confidence that support will be provided willingly if the usefulness and economy of the service given by the colleges and universities are clearly apparent to those who support the institutions. Yet the bureau's surveys present the facts and frequently make comparisons which obviously call for larger provision of resources. The Utah survey shows that in proportion to population Utah has more students in college than any other State; that whereas the average for all States in the number of students that attend college in their own States is 75.6 per cent in Utah the number is 86.7 per cent, and that only one other State shows a larger proportion of its women in college than does Utah. Yet facts show that Utah stands ninth among the States with respect to its income for private institutions, twenty-first in its income for public institutions, and nineteenth for public and private institutions combined. Of the 11 far Western States, Utah stands next to the bottom of the list in the proportion of the tax dollar expended for higher education, Arizona leading the list with 5.24 per cent, and California ending it with 2.33 per cent.

The bureau survey of Kansas makes it clear that the State is not giving the financial support that it should to higher education. It recommends that the legislature provide for the needs of its State institutions through means of a mill tax.

Data resulting from a study of the economic and social conditions of Tennessee—its resources, transportation, population, and the condition of elementary and secondary education—indicate that Ten-

nessee is economically able to do its full share in educating its people, and that, with the improvement of its secondary schools, it will soon need to make better provision for college and advanced education.

Surveys made by other agencies emphasize deficiencies in support of higher educational institutions.

In its study of higher education in Indiana the commission reached certain of its conclusions through a comparison with the six other States of the North Central section (Illinois, Iowa, Michigan, Minnesota, Ohio, and Wisconsin), in which economic and industrial conditions are similar to those in Indiana. Comparisons are made of the area, population, value of products, and wealth and income of Indiana with these six States as related to their ability to support education. On the basis of these comparisons the conclusion is reached that Indiana should contribute 10 per cent of the combined funds given for the support of this group of States.

While Indiana supports generously elementary and secondary education, it is the only State in the North Central group in which the support given to higher education, public and private, is below the standard of the North Central group. In view of the failure of the private colleges to contribute support equal to that contributed by the privately controlled colleges of the six other North Central States, the commission believes that the State will be compelled to choose between three alternatives:

(1) To offer a relatively limited program of higher education, (2) to accept a quality of instruction and service inferior to that of other North Central States, or (3) to contribute to higher education considerably more than 10 per cent of the amount contributed by the seven North Central States.

A study of the plants of the institution, including their utilization, and the equipment of each, showed that because the State "has not supported higher education in an adequate manner in the past" there "has resulted an accumulated deficit in buildings and equipment. The physical plants are all inadequate to meet the needs of the institutions." Suggestions for the amelioration of the conditions brought about by the failure of the State to support higher education on an ample basis include the raising of from 40 to 50 per cent of the present student fees of the two State universities.

With reference to funds for the institutions of Texas, the survey commission condemns the practice of appropriating for individual items, and urges instead the appropriation of lump sums. It doubts the expediency of a mill tax, concerning which there has been considerable discussion in the State, but recommends that consideration of the matter be postponed until a centralized board of higher

education shall have opportunity to make a unified system and propose a State program of higher education.

That "the government of the Philippines must give more support to its university and with increase in resources a considerably increased proportionate share" is obvious from the results of a study the commission made of the relation between expenditures for higher education and population in 32 States and the Philippines, which shows the Philippines at the bottom of the list in its per capita expenditure for higher education. The commission recommends that a stable income for the university be assured by setting aside for this purpose a definite percentage of the insular revenues, and that an appropriation be made to the university to provide for present and future building needs, to be available in annual installments during the succeeding five years.

The report on the University of Porto Rico recommends that an annual tax of 2 mills on all real and personal property in the island be provided, the proceeds of the tax up to the sum of \$600,000 to be used for the support of the university. In previous years the customary appropriation for the current expenses of the university had been \$150,000, supplemented infrequently by special appropriations for new buildings.

II. CITY SCHOOL SURVEYS

By WALTER S. DEFFENBAUGH

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INTRODUCTION

"The school survey is a passing fad," said some of the schoolmen of the country 10 years ago; but judging from the number of city school surveys that have been made within the past decade, and especially from the number that have been made since 1922, the movement is gaining momentum.

In addition to the surveys made by persons or agencies employed especially for this purpose, there have been numerous self-surveys, particularly in those city school systems having research bureaus.

In the preparation of this report 62 surveys, made since 1922 by outside experts or agencies, have been examined. Twenty-six of these may be classed as general or comprehensive surveys and 36 as surveys of some particular phase of a school system, such as school buildings.

The general or comprehensive surveys have had as their aim the appraisal of the entire school system. Not only is the efficiency of the school system determined as scientifically as possible with the

means at hand, but recommendations based upon the facts as found are made to show how the school system may be improved. Usually a program is outlined, only a part of which, however, can be put into operation immediately. In fact, if any school board should attempt to adopt and to put into operation at once all the recommendations made in most of the city school survey reports the school system would suffer. The recommendations are made with the expectation that they will be gradually adopted over a period of years. Possibly one weakness in some of the survey reports is that the recommendations are made without pointing out their relative importance.

One of the distinguishing features of the later city school survey reports is the fact that their aim is wholly constructive. This does not mean that the weak points of a school system are not brought out, but such points are not mentioned unless followed by constructive recommendations. The survey that does nothing but point out the weakness of a school system should not be considered a survey. If the surveyor has no remedy for sore spots he should not uncover them. Possibly some of the survey reports do not give enough attention to the good points in the school systems surveyed or what the schools have accomplished over a period of years.

Within the past few years the school building survey has become as popular as or even more popular than the general survey. Now no progressive board of education thinks of erecting school buildings without first studying the school building needs of the city—the number of buildings necessary, the number of old buildings that should be continued in use, remodeled, or abandoned, and the number of new buildings that should be erected, where the new buildings should be erected, and the kind of buildings needed.

In many instances boards of education are not content to depend upon the school building committee of the board or upon any one else connected with the school system to make a survey of the school building needs, so they employ some one to direct a survey in order to determine what the school-building program should be, not only for the immediate present but for a period of years.

No two city school-survey reports are organized exactly alike, not even those of the surveys made by the same agency. The characteristics of the school systems surveyed determine to a certain extent the method of organizing the reports. All the general surveys, however, treat about the same topics, as administration, school buildings, school finances, curricula, school population, pupil achievement, and teaching staff.

However valuable surveys made by persons or agencies not connected with the school system may be, every city school system should conduct a self-survey. At least certain data should be collected and compiled so that whenever anyone from outside the school system

called on to make a survey it would not be necessary to spend weeks collecting data that should be on file. One may wonder why it is necessary for outside surveyors to administer various kinds of tests, and why they should laboriously collect information regarding school attendance, progress through schools, etc. Every school system should conduct testing programs and should have on hand such data as surveyors usually request of the school system surveyed.

Possibly one of the best uses city school systems could make of specialists in various lines would be to call them in when needed as consulting experts. Such a plan would not in any way lower the importance of the office of the city school superintendent. He, in the end, would make his recommendations, but in the light of the opinions rendered by the consultants. An outside person may get an angle on the school situation that those working on it every day may not have. The board of education and the superintendent of schools would know whether or not the recommendations could be put into practical operation.

ADMINISTRATION

All the general school-survey reports made in 1922-1926 discuss one or more of the problems of school administration, such as the relation of the school board to city officials, standing committees, functions of the board of education and of the superintendent of schools, and the relation of the business manager to the board and to the superintendent.

Few surveys were made during the four-year period of fiscally dependent city-school systems; that is, school systems whose budgets may be revised either as to details or as to the total amount. But in all surveys that were made of fiscally dependent school systems the survey committee recommended that the schools become fiscally independent. The survey report on the schools of Watertown, N. Y., for example, emphasizes the need of action to make the Watertown School Board independent of municipal government, saying:

Experience has shown that the results of this unfortunate division of responsibility are bad. It leads to friction between municipal officials and school boards. Responsibility is shifted back and forth. Petty bickerings occur. The transaction of important school business is often seriously delayed. When lowered school efficiency results, school boards blame the municipal officials and the municipal officials blame the school board. It is difficult for the citizen to fix the responsibility in his own mind. But the greatest sufferers in the whole situation are the children.

Often when such conditions arise under the dependent form of school-board organization neither the municipal government nor the school board is to blame. It is the plan of organization that is at fault. Divided school control inevitably leads to conflict and inefficiency, no matter how conscientious municipal officials and school boards may be.

Watertown is among the cities whose school boards function under the dependent plan of organization. The school board is appointed by the mayor, and the city council has played considerable part in determining the amount of school expenditures. Watertown has not escaped the evils that inevitably result from double-headed responsibility for school control.

The survey report on the school system of Providence, R. I., also emphasizes the need of fiscal independence. The survey committee recommended that the school committee be given, in addition to those revenues allocated to schools by State laws, such funds as they may require for the maintenance of the educational program adopted by them not to exceed 35 per cent of the tax revenues of the city for the next three preceding years. The survey staff explains that in consideration of the provision giving the school committee the control of its own budget, the schools will never receive so much as 35 per cent of the current revenues from taxation, since the determination of this amount is based upon the revenues of the next three preceding years. It was also recommended that, in case more than this 35 per cent is needed, the law be enacted to carry the provision that a larger sum of money may be appropriated by the council upon the recommendation of the school committee.

The Springfield, Mass., school-survey report shows that over and over again there appears in matters upon which the school committee has reached a decision the necessity for appeal to one or the other municipal authority, and that as a result there is delay in providing the services or materials necessary for the schools. The survey staff, with such facts before it, made the following recommendations:

1. That the Legislature of Massachusetts be asked to enact a law that will give the school committee of Springfield complete control of the school system. That within a limit to be set by the legislature the school committee have a right to determine the tax levy for schools.

2. That the school committee be given complete authority for the erection of new buildings and for their operation and maintenance.

Standing committees.—The survey reports have been practically unanimous in recommending that standing or subcommittees of the board be abolished, since there is little for such committees to do. Boards of education, it is shown, employ experts to have charge of the various departments, and these experts should report to the entire school board through its chief executive officer—the superintendent of schools. The Racine, Wis., school-survey staff says:

Eliminate standing committees. A city looks to the board of nine members to manage its schools. With standing committees the board breaks itself up into several smaller boards, loses some of that unity of understanding on the part of the whole body which is so essential, scatters its energies, and wastes its time.

An excessive use of the committee system is pointed out in the survey report of the schools of Providence, R. I. At the time of the

survey there was an executive committee and 18 other standing committees of 5 members each, and in addition to these there were 40 ward committees, composed of 3 members each. The survey staff recommended that the school committee act as a committee of the whole and that all standing committees be abolished.

The survey report on the schools of Lancaster, Pa., declares that the abolition of standing committees causes a practical increase in the responsibility of every member of the board, since as a member of a subcommittee he usually feels chiefly responsible for the work of his subcommittee and only a limited responsibility for decisions relative to the work of other subcommittees.

FINANCES

All the school surveys recommending an expansion of the school system, either as to program of studies or as to a school-building program, discuss the financial aspects of the school system. The reports call attention to the facts that increased cost of living brings about additional costs in education, and that the increased demands made upon the schools also increase the cost. Attention is also called to the fact that the increased cost of education is in some respects only a seeming instead of a real increase. The following extract from the survey report of the schools of Port Arthur, Tex., illustrates this fact:

Port Arthur's increase in total school expenditures for any item, stated in actual dollars, because they contain a mixture of real and seeming increases, are utterly misleading. For example, the increase in current expenses from \$70,480.32 in 1915 to \$301,944.15 in 1925 at first seems huge. But when these expenses are analyzed to take into account the increased enrollment, and the decreased purchasing power of the dollar, the increases prove to be far more seeming than real.

The Port Arthur survey report contains a chart which shows that apparently the total expenditures from 1915 to 1925 increased 599 per cent, while in reality they increased only 30 per cent, and that most of this increase was due to debt service and capital outlay. If this same method had been used in all other surveys the increased cost of education in the cities surveyed would no doubt have been found small, especially the increased cost for current expenses.

Among the questions that the survey reports attempt to answer regarding school finances are: How much is being expended on the schools; how are the expenses distributed; is the financial policy good; can and should more be spent on the schools; what is the per pupil cost, and how does this compare with the per pupil cost in other cities; how does the wealth of the city compare with that of other cities?

Some of the survey reports analyze expenditure by schools and by departments in the high school. The Port Arthur survey shows that, in general, small schools cost more per pupil than large schools, provided the educational programs are equivalent. This report, as well as other reports, shows that there is wide variation of costs in the high-school subjects due to the average salary paid the teachers of each subject, the size of classes, and the average number of classes taught by teachers in each subject. The vocational subjects usually cost more per pupil than any other subject. For illustration, the annual cost per pupil by high-school subjects, based on teachers' salaries only, as given in the Port Arthur survey is: Vocational education, \$85.77; industrial arts, \$30.66; home economics, \$22.70; science, \$19.84; Latin, \$16.99; music, \$13.59; English, \$12.73; Spanish, \$11.55; history, \$9.06; mathematics, \$8.37; and physical education, \$7.77.

SCHOOL-BUILDING SURVEYS

It is now recognized that school-building surveys are essential in making school-building programs. Not so many years ago school buildings were located and erected without much thought as to the future needs of a city; now careful studies are made of the city itself to discover population trends. Some sections of the city may have reached their maximum growth or are growing slowly, while other sections are growing rapidly. If it can be known in which section of the city the children will be living and their approximate number 10 years hence, the matter of locating school buildings becomes a comparatively simple matter.

Another step followed by the building surveyor has been to evaluate the present school plant to see which buildings should be abandoned, which may be remodeled, and which may be used without any changes, and how many buildings will be needed to house not only the present school population but the school population 10 or 15 years hence. In many cities it has been found that by the time a new building is completed there are more than enough children to fill it. It is pointed out in the survey reports that the building program should provide for the erection of buildings to keep pace with the growth in population so that buildings may be erected before the schools become overcrowded.

The surveyors think not only of the number of classrooms necessary to house the school population, but of the program of studies. A building erected 20 years ago may be a good building for housing children, and from the builders' point of view it may be too well constructed to be abandoned; but from the schoolman's point of view it may not be suited to a modern program of studies.

The school building survey reports call attention to the fact that the program of studies has greatly expanded and that new types of

buildings have to be designed. To quote from the survey report on the school-building program for Berkeley, Calif., one of the many reports emphasizing the need of adapting the school building to the program of studies:

A school building, like a bank, a store, a factory, a church, or an office building, must be designed with reference to the activities it is to house. Accordingly, the beginning of a school building is not the plans of an architect but the plans of the schoolmaster.

The Portland, Oreg., school-building survey, recently conducted by the Bureau of Education, is an illustration of the method of conducting school-building surveys which is being developed by the bureau; it is also an illustration of the value of being able to check the methods used in the light of the actual carrying out of the building program. Because an opportunity was given to check the recommendations of the survey after the building program had been in operation for two years, it was possible to make an interesting study of the adequacy of the methods used and of the accuracy of the bureau's forecasts in regard to school-building needs.

Recommendations were made covering a 15-year period, but since nearly the whole school plant had to be replaced and since only a certain number of buildings could be erected each year the school-building program was divided into three five-year periods, as follows: 1922-1927, 1927-1932, and 1932-1937.

When the board of school directors invited the bureau to make the survey they asked that two building programs be submitted, one on the basis of the usual form of school organization and one on the basis of the platoon or work-study-play form of school organization. This was done. No recommendation was made as to which program should be adopted. The board of school directors, however, voted to adopt the school-building program on the platoon or work-study-play plan for the first five-year period.

Two years after the survey was made the bureau specialist who had charge of the survey returned, at the request of the board of school directors, to check the recommendations for the second five-year building program. The adequacy of the building program with regard to the population study and estimated increase in school population, the number and location of buildings, and the cost of the building program were checked. The survey staff had recommended that the school-building program be carried out on the basis of divisions or groups of schools rather than on the basis of individual schools. There were 21 such divisions, some of them including 3 or 4, others 8 or 9 schools.

When the bureau's estimates of growth for these 21 divisions were compared with actual growth from 1922 to 1925 it was found that the survey staff made underestimates in respect to only 4 out of the

21 divisions. In one of the four divisions the survey staff had stated in the original report that the division was so new that no accurate estimates could be given and in the other three the boundaries had been changed since the original survey. A summary of the comparison of the survey estimate of the percentage of increase per year for the east and west sides of the city with the percentage of increase on the basis of actual growth in 1922-1924 and 1922-1925 is given in the following table:

Percentage of increase per year

Location	On basis of growth from—		On basis of survey estimate
	1922-1924	1922-1925	
East side.....	4.82	3.36	4.47
West side.....	-.27	-2.80	1.90
Total.....	3.92	2.28	3.96

The survey also estimated the number of classes that would have to be provided for by 1927. The following table shows how the estimate compared with the number that would have to be taken care of on the basis of the actual growth for 1922-1924 and 1922-1925:

Number of classes to be provided for

Location	On basis of growth from—		On basis of survey estimate
	1922-1924	1922-1925	
East side.....	984	928	968
West side.....	168	146	167
Total.....	1,152	1,074	1,132

The total cost of the building program for the first five-year period, 1922-1927, as estimated by the survey, was \$5,109,150. The board of school directors asked for a bond issue of \$5,000,000, and it was voted. Because of certain local conditions and changes in building costs it was possible for the board of school directors to carry out the program for the first five-year period for a little less than the \$5,000,000.

The estimate of the survey in 1923 for the cost of the building program on the work-study-play or platoon plan for the second five-year period, 1927-1932, was \$4,293,500. After checking the recommendations in 1925 it was estimated that the cost would be \$4,770,200 for the second five-year period, the difference being due to

the increase in high-school population. The revised estimate was not given on the basis of the traditional plan, as, after two years' experience the platoon or work-study-play plan had been adopted for the city.

The 6-3-3 plan in relation to building programs.—The adoption of the 6-3-3 plan of school organization is considered in the school-building survey reports. For the larger cities it is usually recommended that junior high school buildings be erected in various sections of the city so that pupils of junior high school age may not have to travel great distances to school. The junior high schools relieve the elementary schools of grades 7 and 8 and the high school of grade 9.

For the smaller cities the recommendation is made in some of the survey reports that the schools be organized with six years in the elementary schools and six years in the high school, and that all the pupils of secondary-school age be housed in one building under one organization.

Financing school-building programs.—The problem of financing a school-building program receives much attention in the reports on school buildings. Data are presented to show the ability of the city to finance the program outlined, and recommendations are made as to the best method of providing the funds. Practically all the surveys recommend that bonds be issued, but in several instances attention is called to the cash-payment plan. To quote from the school-building survey report of Berkeley, Calif.:

The credit plan is best adapted to, and is usually essential to, intermittent construction as a policy of developing a school plant. If we huddle our construction into lumps, we must pay the cost in lumps or else find a way to spread the cost over subsequent years. The cash plan is adapted to continuous construction as a policy because the cost comes in small, regular allotments which adjust themselves comfortably to the requirements of a sound taxing system.

The director of the Berkeley school-building survey takes the position that, other things being equally suited to the two plans, there is no doubt that for public financing the cash plan is the better. He says:

There can be no proper social gain in borrowing for the sake of putting off payment. This is different in private finance, where the end sought is profits and not social service. On the other hand, we must not be led into the assumption that there is any special virtue in any given plan as such. A plan in public financing is good or poor accordingly as it meets or does not meet actual needs. These needs are: (1) To get the money when and for the time and purposes needed, and (2) to get it at the lowest net cost consistent with the money market and with wise management in its use.

JUNIOR HIGH SCHOOL SURVEYS

All of the general school survey reports treat of the junior high schools already organized or recommend that such schools be organized as early as practicable. At least two reports are devoted entirely to the junior high school. One of these is a report of the committee appointed by Dr. William L. Ettinger, then superintendent of schools of New York City, to make a survey of the junior high schools of that city. The other is a report on the junior high schools of Rochester, N. Y., prepared by the junior high school council, consisting of the principals of the junior high schools and various other directing heads, both in junior high schools and at the central office.

The survey of the junior high schools of New York City treats of the following: Organization of junior high schools, growth of junior high schools, growth of the junior high school system, classification of pupils, course of study, differentiation of courses, number of teaching periods, success of junior high school pupils in various subjects, use of prognostic tests, pupil self-government, after-school activities, training of junior high school teachers, effect of the organization of junior high schools on part-time and double-session problems in elementary, junior high, and high schools, and methods of teaching.

The Rochester report includes the following: Origin and growth of the junior high school plan, organization and supervision, curriculums and courses of study, results, costs.

Each of the topics included in these two reports is treated fully. The conclusions regarding the progress of pupils in the last year of the junior high schools compared with the progress of pupils in the first year of the senior high schools are interesting and significant.

The survey report of the junior high schools of New York City shows that in the first and second terms of high-school work the per cent of failures among junior high school pupils is less in all subjects than the per cent of failures of senior high school pupils, and that in some subjects, the per cent of failures among junior high school pupils is much less than the per cent of failures among senior high school pupils.

The question arises as to the value of these conclusions on the ground that the standard for the successful completion of a subject may not be the same for the two groups of schools. The survey report answers this question, by stating that there is no evidence that the standard is lower in the junior high schools than in the senior high schools, and that as positive evidence of the standard in junior high schools, the study made by the committee of the per cent of junior high school pupils who succeed in third-term work

in the senior schools, marked by senior high school teachers, is greater in Spanish, Latin, and English, and less in accounting, French, and typewriting than the per cent of senior high school pupils who succeed in third-term work in these subjects.

The reason given by the committee for fewer failures in the junior high schools is that the ninth year pupils in these schools are taught by principals and teachers who have had experience in the lower grades of the schools and are better able to adapt their methods to their pupils.

The committee also says that the conclusion seems to be warranted that the junior high schools are realizing two advantages which were claimed for them, namely, that they bridge the gap between the 8B grade in the elementary schools and the 9A grade in the senior high schools, as it exists under the 8-4 plan, and that the junior high schools retain a larger number of pupils for successful ninth year work than the senior high school.

ALL-YEAR SCHOOLS

The general school survey reports are silent on the matter of all-year schools, no doubt because none of the cities in which general surveys were conducted has organized such schools. One survey, however, which has attracted nation-wide attention is that treating specifically of the all-year schools of Newark, N. J. In June, 1925, the board of education of Newark invited Dr. M. V. O'Shea and Dr. William Farrand to examine evidence relating to the success or failure of the all-year schools in that city. The report submitted to the board recommended that a complete survey be made of the all-year schools to secure impartial data in view of which the survey committee might make positive recommendations regarding their continuance.

The board of education adopted the recommendation, and invited Dr. M. V. O'Shea, Dr. William Farrand, Dr. W. C. Ryan, jr., Dr. W. A. McCall, Dr. A. T. Wylie, and Dr. P. K. Atkinson to make the survey.

The committee found that while the all-year schools do not do what was originally claimed for them—that is, carry any considerable number of pupils through eight grades in six years—they do advance their pupils more rapidly and give them greater educational attainment than pupils of similar ability, heredity, and social background in the traditional schools; that while it takes the average pupil in an all-year school nearly eight years to complete the elementary grades, it takes the pupils of corresponding capacity in a traditional school a distinctly longer time; that while all-year graduates do not make so good showing in high school as tradi-

tional graduates, the reason is not less efficient work in the schools but the innate capacity of the pupils themselves, many of whom are of foreign parentage, and the fact that the all-year schools are holding and carrying through a class of pupils who in the regular schools would be likely either to drop out or to be seriously retarded; that these schools, in the face of great difficulties, are doing extremely valuable work, and are rendering great service, particularly to children of foreign parentage and unfavorable home conditions; that these children will suffer educationally if the all-year schools are abolished; and that the additional cost is not excessive, considering the service rendered.

In view of all the evidence, the survey committee recommended that the all-year schools of Newark be continued and that they be given every facility to make their work even more effective than it has been thus far.

The Newark Board of Education, after giving the report of the survey committee due consideration, decided to continue the all-year schools.

SUPERVISION

The supervision of instruction is a topic discussed in most of the general school survey reports. The technique of supervision is not so much treated as is the supervisory organization of the school system.

Two plans of supervisory organization are considered in several of the survey reports. One is the plan of supervision of instruction entirely from the central office staff; the other makes the building principal responsible for the entire life of the building, including the leadership in the improvement of instruction as well as in administrative matters.

The school survey reports discussing the work of the principal recommend that he be the real head of his school. To quote from the survey report of Watertown, N. Y.:

The principal should be the professional as well as the managing head of the school. No officer of the system should come between the principal and the teacher. With this authority there must also go responsibility for the maintenance of proper standards of instruction. When a city gives added salary that goes to a principal it has a right to expect more than is required of a teacher. In a word, the city is justified in expecting that the principal shall be a professional leader of teachers in that school.

Making the principal the professional head of his school does not imply, according to the survey reports, that there shall be no general nor special supervisors. The survey report of the schools of Beaumont, Tex., makes this point clear:

No principal can become so expert in all the subjects of the curriculum as to assume the duties of supervisors, each of whom is giving his whole time to a single field. Furthermore, few, if any, principals are as yet expert trainers of teachers. The point is that principals should interest themselves in all phases of the work of educating the children in their schools and should fit themselves to lead and guide their teachers with steadily increasing skill. The principal who is alive to his opportunities will take advantage of all that the superintendent and special supervisors have to offer for his own training. The specialists will act as advisers and periodic assistants, while the principal will be on the job every minute.

In some school systems, no doubt, itinerant teachers are called supervisors. The Racine, Wis., survey staff emphasizes the fact that a distinction should be made between supervisors and "traveling teachers." To quote from the report regarding the function of the supervisor or the specialist:

Every school of any considerable size should be provided with specialists either on the part-time or full-time basis. It should be the function of such individuals to act as expert advisers to the superintendent in the several fields of learning and to assist in supervision and the improvement of teaching. The chief functions may be listed as follows: (1) Research and the organization of research; (2) preparation of instructional materials, outlines, courses of study, teaching aids, etc.; (3) training activities—the improvement of teachers and principals in service; (4) community activities and contact with outside agencies—selling the school to the community; (5) expert assistance in the selection of the materials of instruction—textbooks, supplies, and equipment; (6) expert assistance in the selection, appointment, and appraisal of the teaching staff; (7) survey, report, and schedules; and (8) general administrative matters upon assignment from the superintendent.

The report calls attention to the fact that while visitation is important, it is only one of the several functions of supervision.

More time should probably be given to research, preparation of instructional materials, and other means of training teachers and principals in service. The principal should be made responsible for the instructional conditions in his buildings and trained to assume this responsibility. * * * Principals are line officers; supervisors are staff officers.

The Lockport, N. Y., survey staff recommends that the superintendent's special assistant, known as the supervisor of kindergartens and grades 1 to 6, work largely through the principals in securing a better educational product, but that no principal should be charged with supervisory duties unless he has had special preparation for supervisory work or prepares himself for such positions.

In the Providence, R. I., survey report is found the recommendation that principals be trained and equipped for the supervision of instruction, and that they be held responsible for the work of their school in so far as it may be affected by supervision. Says the report:

On the staff of the assistant superintendent in charge of elementary schools there should be certain persons who are able to deal with special subjects. There are at least three well-defined needs for such specialists:

The kindergarten should have one or more supervisors.

Wherever there is a weakness in the teaching staff or a new subject introduced in the curriculum there will be need for persons who are competent to direct the teaching of subjects involved. In general these should not be permanent officers, but the number and character of these supervisors or demonstration teachers should vary with the needs of the system.

There is a need for persons who are competent in the field of supervision and who are also able to conduct experiments that have for their purpose the improvement in the methods and materials of instruction. These people should not be expected to spend their time in promiscuous visiting of schoolrooms for the purpose of locating difficulties. When the principals encounter a difficulty that they can not remedy they should have the privilege of calling upon the assistant superintendent for the services of the supervisor who is able to render the assistance that is desired.

THE TEACHING STAFF

The various general school survey reports usually devote a chapter to the training and experience of teachers and their salaries. The standard of training recommended in the survey reports is at least two years of normal-school training for elementary school teachers and at least four years of college training for high-school teachers. Although the city school systems surveyed have adopted such a standard, none of them as yet can claim that all their teachers measure up to it, since some of the teachers who entered the service not so many years ago did so with very little professional training.

The general survey reports recommend that salary schedules should make a difference in salaries on the basis of the amount of training and length of experience. That is, a teacher who has had four years of normal school or college work should receive a larger initial salary than the teacher who has had less training.

Two recent surveys of teachers' salaries which may be mentioned are "The Survey of the Salaries of Teachers in the Public Schools of Pittsburgh, Pa., in Relation to the Cost of Living," and the "Report of the Committee on the Study of Salaries in the Cincinnati Public Schools."

The Pittsburgh salary survey was undertaken at the request of the Pittsburgh Teachers' Association. The study was made under Dr. Marion K. McKay and Dr. Colston E. Warne, director and assistant director of the department of economics, University of Pittsburgh. Among the conclusions reached were that, although the salaries have risen, the advances have been more apparent than real. To quote from the report:

It appears that the median Pittsburgh elementary school teacher of 1927, despite the higher standards required of her, receives but little more in pur-

- 2 chasing power than in 1900, and scarcely as much as in 1913. The salaries of high-school teachers have followed a somewhat similar course. Since 1900 a slight increase has been made; since 1913 there has been a marked decline.

As a rule the remuneration of teachers has kept pace with that of public-school officials and comparable municipal employees. For skilled Pittsburgh craftsmen for whom data are available, the percentage of increase in wages has been greater than that of teachers. The same conclusion applies to the basic wage of unskilled steel and iron workers.

The survey report in discussing what constitutes an adequate salary, says:

Vexing questions arise in the fixation of any salary schedule. The issues involved are so intricate, the demands on employees are so changing, and the needs are so varying that it would be a bold person who would state that he could establish a particular standard of payment just at a given time.

Among the questions to consider, according to the survey report, are: (1) To what extent should the salary be determined by the training of the teacher? (2) What part should teaching experience play? (3) To what extent should individual efficiency be considered? (4) Should the salary be at such a level as will just insure the retention of the best qualified teachers? (5) Should the ability of the community to pay for education be primary in the establishment of salary schedules? (6) To what extent should the remuneration of other professional groups serve as a guide? (7) What differentials should be provided to serve as a constant impetus to higher professional attainment? (8) Should the foundation stone be the cost of supplying an adequate living for the teacher and his or her dependents?

The Cincinnati survey of teachers' salaries considered among other things the factors required in the formation of a salary schedule, the adjustment of salaries of teachers now in service to the schedule and probable costs. The survey committee recommended that the single salary principle should prevail. Both the arguments for and against the single salary are presented in the report. The committee says:

While approving the principle that maxima and increments should vary with the amount of preparation, the committee subscribes to the principle that the minimum should be the same for all. It is just as necessary that a teacher with minimum preparation should, as well as a college graduate, receive a compensation that makes for a decent living in keeping with the necessities of our profession.

Both the Pittsburgh and the Cincinnati reports contain many tables that are of value to any committee making a study of teachers' salaries.

PROVISION FOR INDIVIDUAL DIFFERENCES

The data presented in the various survey reports show that the percentage of nonpromotions is too high. Such expressions as the following may be found in most of the reports:

The large per cent of failures is an indication that there is an inadequate adjustment of educational opportunities to pupil needs and abilities. One of the significant causes of the large amount of failure is the lack of any definite policy as to when a child shall be required to repeat a grade. The wide range of failures between schools, grades, and subjects suggests a lack of careful supervision within the schools and a lack of unity in policies and standards of achievement, organization, classification, and promotion throughout the city.

It is evident that much remains to be done before all children may progress through school at the rate commensurate with their abilities and effort. In order better to provide for the individual child the survey reports contain the recommendation that children of like ability be grouped together for purposes of instruction and that the courses of study be adapted to the various ability groups.

Several ways of providing for individual differences are discussed in the general survey reports. Among the plans considered are: (1) Grouping the pupils and advancing the brighter children as rapidly as possible; (2) giving the brighter children more to do without advancing them rapidly from one grade to another; and (3) the adoption of an individual instruction plan.

None of the general survey reports gives much attention to any of the individual instruction plans. The survey of the schools of Winnetka, Ill., was, however, made to evaluate the individual technique used in the schools of that city. Since this is the only survey that attempts to evaluate an individual method of instruction, a brief summary of the survey is included in this chapter.

The survey of the Winnetka schools was made by Dean Gray, of the University of Chicago; Mr. Carleton Washburne, superintendent of schools of Winnetka; and Miss Mabel Vogel, research assistant, Winnetka public schools, in order to discover the effectiveness of the Winnetka technique of individual instruction. The five basic principles of the technique as formulated by the survey staff are (1) a clear definition of the essentials of the fundamental subjects in terms of units of achievements; (2) self-instructive, self-corrective practice materials in these subjects; (3) diagnostic tests to measure achievement; (4) individual subject promotions, within certain limits, on the basis of achievement in the fundamental subjects; and (5) large emphasis on group and creative activities during certain periods of the day.

It is evident that an investigation of the merits of such a program involved many complex problems. The following were the specific questions that the survey attempted to answer:

1. Does the Winnetka technique result in more or less retardation of pupils than is found in other schools of similar social composition? Does it result in unusually rapid advancement of many pupils?
2. Does the Winnetka technique actually provide for individual differences among children? Does the school progress of children in Winnetka correlate with their intelligence?
3. Are the children of the Winnetka public schools so selected as to make generalizations from them applicable to other schools?
4. Are those subjects which are being taught on an individual basis in Winnetka learned more effectively or less effectively than in schools using the usual class method?
5. Do children who have had their elementary training under the Winnetka technique do satisfactory work in the high school? Are they able to compete successfully, so far as marks are concerned, with children who have been taught by the usual group methods, when all work together in a typical high school?
6. Are individual progress and self-instruction, per se, more efficient or less efficient than group or class instruction, as shown by controlled experiments?
7. Is the proportion of children apparently concentrated on their work greater or less under the Winnetka technique than under ordinary class procedure?
8. Do the pupils in the Winnetka schools devote more time or less time to group creative activities than do those in a typical school system using the class method, or those in a private experimental school, or those in a university laboratory school?
9. Does the Winnetka technique impose a greater burden on the teacher than does regular classroom instruction?
10. Is the system of individual instruction and progress responsible for the per capita cost in the Winnetka public schools, which is higher than that in most public schools?

The survey staff calls attention to the fact that these 10 problems represent but a fraction of the studies that must be made in determining the merits of any program of instruction. The survey staff frankly state that in some cases the data are inadequate to justify final conclusions, and that in other cases data were secured which are decidedly significant, if not entirely conclusive.

The following conclusions were reached: 1. The mastery of the drill phases of these subjects as measured by the tests used is better adapted to the varied capacities of individual children than is possible under the traditional class method.

2. Grade repetition is eliminated, in that no child repeats the work of a grade; retardation is markedly decreased; the proportion of children making "normal" progress is increased; and there is a slight increase in the proportion of children accelerated.

3. A greater amount of time per day is free for group and creative activities.

4. The efficiency of the work in reading, language, and arithmetic as measured by standardized tests is increased.

The disadvantages resulting either from the general plan or of the detailed technique were, however, found in the following particulars:

1. The ability to spell words not studied was decidedly lower in Winnetka than in the other schools. While progress in this ability between September and February was slightly better in Winnetka than in the other schools, owing, perhaps, to a change in technique, the technique used prior to 1923 was undoubtedly ineffective in this particular.

2. If the appearance of attentiveness is an adequate criterion, there is a somewhat smaller percentage of children concentrating on their work under the individual instruction technique than under that of class instruction.

Among the many results which remained unmeasured, and concerning which the survey staff could make no conclusive statement, were: Is individual work in content subjects, such as history, geography, and science as effective as it is in the "tool" subjects of reading, spelling, formal language, and arithmetic? Can the so-called fundamentals be learned more rapidly and effectively as drill exercises apart from their natural setting? Do pupils learn more effectively under the stimulus of group activities than when working alone?

The survey report concludes:

While, therefore, much experimentation remains to be done, and wide cooperation is needed, it appears fair to conclude that it is possible for public schools to make much greater adaptation to individual differences than is customary; and that, so far as we have been able to measure the results of such adaptation, most of these results are good.

INSTRUCTION

The earlier school survey reports usually treated at some length the quality of instruction as observed by classroom visitation. The more recent surveys do not place so much reliance upon observation as a method of determining the quality of instruction, but rather upon the achievement of pupils as measured by standardized tests. No survey of instruction is considered complete unless the pupils have been subjected to a battery of intelligence and achievement tests. Possibly some of the surveys that do not include a discussion based upon the observation of classroom work have gone to one extreme. After the tests have been given and analyzed, classroom visitation should reveal why certain classes have or have not made good scores.

According to the Peoria, Ill., survey it is possible for an experienced observer to infer the general quality of the instruction by noting such characteristics as the apparent purpose of the teachers, interest of pupils and teachers in the work, methods of dealing with pupils' mistakes, and the general discipline prevailing in the rooms.

The survey of the schools of Racine, Wis., devotes more space to a discussion of classroom instruction than any other of the later surveys. These discussions are based both upon observation and results as determined by tests. The report contains a chapter on each of the following topics relating to instruction: Measuring the results of instruction; observation in the kindergarten and first grade; reading; arithmetic; handwriting; spelling; commercial education in the junior and senior high schools; English language; foreign languages; health education; history and civics; mathematics in the junior and senior high schools; music; science; special schools and classes; and vocational education. Space does not permit the presentation of any of the conclusions reached regarding instruction in the Racine schools, but the report furnishes a valuable contribution on instruction in the various elementary and high-school subjects.

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III. RURAL EDUCATION SURVEYS, 1922-24 AND 1924-26

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NUMBER AND SCOPE

A large number of educational surveys of rural-school situations were made during the four-year period ending December 31, 1926, many of which were reported in mimeographed form only and principally for local use. Those which have had the widest circulation are the detailed studies issued as bulletins of State departments of education, extension divisions of colleges and universities, or similar agencies.

Of the surveys which were entirely or for the most part rural in scope reported during the two biennial periods, 30 are briefly reviewed in the following pages. Twenty-nine of these were published in printed form either as separate reports of rural school surveys or as parts of reports of entire State educational surveys; the other one appeared in mimeographed form. They include state-wide surveys in each of the following States: Arizona, Colorado, Florida, Georgia, Indiana (2 surveys), Mississippi, Missouri, Texas, Utah, West Virginia, and Wisconsin. One county survey was made in each of the following States: Colorado, North Carolina, Ohio, Pennsylvania, South Carolina, and Tennessee; 2 county surveys in Michigan and 3 in Texas; 1 school district survey in California, 2 in Colorado, 1 in Florida, and 1 in Minnesota; and 2 surveys in outlying possessions of the United States—the Philippine Islands and Porto Rico.

Twenty of the thirty surveys reviewed were directed by representatives of higher educational institutions, 1 by the United States Bureau of Education, 1 by an educational foundation, 3 by State departments of education, 1 by a committee of representative citizens including educators, 1 by a State teachers' association, 1 by a county superintendent of schools, 1 by a city superintendent of schools, and 1 by a superintendent of a consolidated school and a representative of a higher educational institution.

An examination of the personnel shows that the practice of selecting as directors of state-wide surveys educational experts outside the States surveyed is the one most often followed. County and

school-district surveys are usually directed by representatives of extension divisions and departments of education in universities and colleges and State departments of education. One of the Indiana surveys was conducted by the General Education Board; the Utah survey by the United States Bureau of Education; the Texas and Mississippi surveys by representatives of Cornell University and the University of Wisconsin, respectively. The surveys of the educational systems of the Philippine Islands and Porto Rico were made under the direction of the International Institute of Teachers College, Columbia University. County and school district surveys in Colorado, Florida, Michigan, Ohio, South Carolina, Tennessee, and Texas were directed by representatives of colleges and universities in the States surveyed; and one in North Carolina by the State department of education in that State.

At least five of the state-wide studies may be classified as self-surveys—that is, surveys the work of which is done by officials connected with the school system surveyed. They are the educational surveys of Arizona, Georgia, Indiana, and Missouri, and the Lackawanna County, Pa., survey. The Arizona survey was conducted under the authority of the State board of education by a superintendent of city schools in that State. The one in Georgia was made, one county at a time, by members of the State department of education. One of the two state-wide surveys in Indiana is the work of a committee of citizens appointed by the governor. The Missouri survey had its origin in a series of conferences called by the State superintendent of public schools of that State in the fall of 1923. Its survey staff consisted entirely of representatives of the State department of education, State university, and State teachers colleges in Missouri. The county survey in Pennsylvania was done entirely by the county superintendent and his assistant.

In addition to the complete surveys of rural school conditions, there were many intensive studies of particular phases of rural school systems made during the four-year period, reports of which are available in printed or mimeographed form. Although such studies are not usually considered "surveys" because of their limited scope, they present unbiased analyses of educational situations and are indicative of the growing tendency among educators to replace opinion with fact when formulating a program for educational improvement. The following are representative studies of this type: School Transportation Problems, and Problems of the One-Teacher School in Massachusetts, 1925, State department of education; Problems of the Larger School Unit in Illinois, 1926, Illinois State Teachers' Association; Consolidated Schools, and Ungraded Elementary (rural) Schools in Minnesota, 1925, State department of education; Centralization and Consolidation of Schools in Ohio, 1925, State

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PURPOSE OF RURAL SCHOOL SURVEYS

Rural school surveys have developed from the occasional descriptive accounts common a few years ago into analytical studies in which facts reached by scientific methods have replaced opinion. They are made for the same purpose as other school surveys, namely, to make unbiased analyses of educational situations which may be used as bases for formulating programs for improvement. They are different from surveys of urban school systems in the matter of detail and in the emphasis placed upon specific problems in analyzing situations. For example, in rural school surveys more attention is usually given to district boundaries, location of buildings, or to pupil transportation than is necessary in analyzing a city school system.

The survey is now accepted as an important feature of administrative technique in rural education. This is shown in the recommendation of practically all State surveys for the establishment of divisions of research in State departments of education, and by the growing number of rural-school surveys. The following is a typical recommendation and the reasons given for such recommendation in a State survey report:¹⁴

Information essential to the efficient organization and conduct of schools, to planning building programs, etc., should be collected, interpreted, and made available for practical use to superintendents through the State department of education. It is believed that Utah might have saved money and promoted school efficiency if, when consolidation was effected, there had been in the State department a research division from which superintendents could have received data and advice on reorganization of their schools, building programs, school organization programs, curricula, and the like, fitted to the new plan of consolidation. Obvious and easily avoided errors in planning and locating buildings,

¹⁴ Survey of Education in Utah, United States Bureau of Education Bulletin, 1926, No. 18. Pp. 36, 37.

in the establishment of many small high schools, and the like, costly not only in money but in the educational welfare of children, were observed by the survey staff in a number of districts.

The results of most surveys find their way to the people through bulletins and reports published by State departments of education, higher institutions of learning, and other educational agencies. Reports of county school surveys, made by the University of Texas, and the studies of the elementary schools of Florida, made as a class project by the department of education in the University of Florida, state that the facts were placed before the people in bulletin form for the express purpose of throwing some light on the rural-school situation in each of the respective States. An interesting and unusual procedure connected with the school survey of type counties of West Virginia was the method of delivering the results of the study to the people. Large charts, graphs, and lantern slides showing the survey results were explained in public meetings held in schools in the counties in which the studies had been made.

In the main, the rural-school surveys deal with practically all problems incident to the systems studied. These include such questions as administration, supervision, tests and measurements, and finance. A few are limited to a single problem. The survey of Colorado, for example, is confined to the study of financing education in that State; that of Rustad Consolidated School in Minnesota illustrates how intelligence and achievement tests can be used in a small school system by local authorities; the Lackawanna County, Pa., survey is a school-building survey.

ADMINISTRATION AND ORGANIZATION

Most of the surveys examined discuss at considerable length the administrative control of rural school systems and such administrative problems as school building, consolidation, extent of school facilities furnished, and teacher preparation.

Administrative control.—In nearly all rural school surveys it is pointed out that school progress is handicapped because of certain legal restrictions and regulations relating to the State and county machinery which is set up for the control of the schools. Some of the most important of these relate to the personnel, organization, and duties of State boards of education, methods of selecting State and county school administrative officers, the organization of State departments of education and units of school administration.

The criticism of State boards of education in reports of State surveys in Arizona, Indiana (survey by the General Education Board), Mississippi, Texas, and Utah relates largely to the ex officio and professional character of the personnel of the boards and to the fact that such boards are noncontinuous bodies.

The Arizona survey shows that the present State board of education consists of 8 members, 5 of whom are ex officio—the governor, the State superintendent of public instruction, the presidents of the university and the two State normal schools. The remaining three members are professional educational officers—appointed by the governor—a city superintendent of schools, a county superintendent of schools, and a high-school principal. The survey explains that executives of institutions should not act as members of a board which is to adopt policies for their own administration, the governor should not be a member of a board of his own creation, and the State superintendent of public instruction should not sit in judgment upon his own activities. The governor and State superintendent of public instruction are elected biennially and are consequently subject to frequent change, the members appointed by the governor generally change with the administration, and the heads of universities and normal schools are selected by boards of which the governor is a member and other members of which are appointed by him. Attention is called to the fact that recent surveys made by the Bureau of Education, General Education Board, and special commissions of educational experts concur in recommending as the best type of board a lay board of five or seven members, either appointed by the governor with the approval of the senate or elected by the people, with terms of office so arranged that not more than two expire in any one year.

The Utah survey recommends that the personnel of the State board of education in the future be more representative of laymen than professional educators and ex officio officers than is the present practice. At present, five of the nine members of the board are engaged in educational work. The Mississippi survey recommends that the present ex officio board of education of three members be superseded by five members appointed by the governor for terms of five or six years.

Appointment by the State board of education of the State's chief educational officers is indorsed by the State surveys of Arizona, Indiana (survey by the General Education Board), Mississippi, and Utah. Such officers are at present elected by popular vote in these States.

The Indiana survey, made by the General Education Board, emphasizes the fact that the chief State educational officer must be assisted by a well-qualified professional staff and must—

depend largely on this professional staff to explain to the people the educational policies and plans of the State, to arouse local public sentiment, to assist in consolidations, and in planning school buildings and grounds, and to advise with superintendents and teachers with regard to the organization of their schools, courses of study, classification of pupils, methods of teaching—in

short, to assist him in serving the people at all times and in all ways in the interests of better schools."

A professional staff, sufficiently large to assist the chief State school officer in the performance of such duties as are mentioned in the Indiana survey, necessitates the organization in the State department of education of such divisions as research, school architecture, teacher training, supervision, business management, elementary education, etc. Other State surveys in which a similar expansion of the activities of State departments of education is recommended are Arizona, Missouri, and Utah.

The establishment of a division of records and reports in the State department of education is recommended in the State survey of Missouri. It is pointed out that in collecting data relative to the problems studied by the survey staff many difficulties were encountered because the records and reports showed inaccuracies and omissions. Because of this experience the survey staff further recommends that the State department of education conduct an intensive campaign among school and county officials for adequate report making, that the blanks now in use be revised and that the legislature attach a penalty upon local school officials for failure to make reports within specified dates.

Survey reports of the Philippine Islands and Porto Rico regard the development of public education in the last quarter of a century as a great achievement. The task of providing an adequate system of education is complicated in both possessions by a language problem. In one instance, it is the attempt to make English the common language of a race speaking many dialects; in the other, it is an attempt to develop the ability to use two languages—English and Spanish. The educational achievement is attributed to a considerable extent to the highly centralized administrative control. The Commissioner of Education in Porto Rico, responsible only to the President of the United States, is said to be practically absolute in authority. While such highly centralized educational systems are desirable from many points of view, the opinion is expressed in both reports that certain modifications are necessary in order to bring about the best results. The chief modification is concerned with the need of developing the human side of administration. There is too much routine and a tendency for supervision to revert to mere inspection. As a consequence an unduly large part of the time of both teachers and supervisors is given to making reports. There is no time for professional advancement through reading, study, conference, or visitation of the work of others.

The county unit of school administration is generally recommended for the States in which the small district unit prevails. In

* Public Education in Indiana. General Education Board, 1923, p. 104.

most of the surveys in which the county is the unit of school administration it was generally found that the powers and duties of county boards of education should be strengthened.

While the small rural schools of Arizona do not present a discouraging aspect when measured by financial support, length of term, qualifications of teachers, and pupil achievement, it is pointed out in the survey report of that State that because of the small school-district unit, with its army of rural trustees, the small rural schools of Arizona present many of the defects inherent in that type of educational organization. This fact has been emphasized in former surveys, and a reorganization on the county-unit basis has been recommended as a remedy in past surveys as well as in this one.

In Indiana the township is the present unit of school administration. The survey made under the direction of the General Education Board recommends that the schools of the townships and of the incorporated towns be brought into a county system, administered by a county board of education provided with requisite authority. The advantages to be gained in changing from the township to the county unit are summed up as follows:

"The county unit of organization makes possible statesmanlike administration and business-like management. Policies and methods of procedure may be evolved applicable to the entire county. The county may be divided, without regard to township or town lines, into an appropriate number of elementary school, junior high school, and senior high school attendance districts; school grounds, school buildings, and equipment for all schools may be standardized; a uniform salary schedule for all teachers may be adopted, based on length of preparation, length of service, and efficiency; uniform courses of study may be prescribed for all schools, etc. On the business side, the adoption of the county unit enables one person to buy all school supplies, to employ all janitors, to provide for the transportation of all school children, to keep all school accounts, to make all school reports, etc. For the sake of economy alone, the county system should displace the decentralized and extravagant township system."

The Missouri survey report calls attention to the county unit law for school administration, which was passed by the general assembly in that State in 1923, but which was later nullified by a referendum vote. This law, it states, was a step in advance over the present method of administering rural schools and is an ideal toward which friends of education in Missouri must work.

Reports of State surveys in Mississippi, Texas, and Utah state that present county-school administrative systems should be modified in order to insure more efficient service. In Mississippi and Texas it is recommended that more administrative powers should be given the county boards of education, including the selection of county

¹ Public Education in Indiana, General Education Board, 1923, pp. 198-199.

superintendents. The Utah system of county administration is cited as an example of good administrative practice and theory particularly in that it has general administrative control over the schools and selects the superintendent of schools. Such changes as are recommended relate to the method of representation of county school board members, remuneration for their services, and provision for clerical assistance for such boards.

School buildings.—Nearly all the 30 surveys have diagnosed the present status of school buildings and made recommendations for improvement. Two were building surveys exclusively—the Wisconsin survey, conducted by the State Teachers' Association of that State, and the survey of one-teacher elementary schools of Lackawanna County, Pa.

The Arizona survey report says that 200 rural school buildings must be erected in that State within the next 10 years for replacement alone; in addition new buildings will be required to care for the rapidly increasing school enrollment. In order that these buildings shall be well built and conform to proper standards in lighting, heating, ventilation, hygiene, and other factors of school construction it is recommended that the power of approval of building plans be placed in the State department of education, and that school districts be required to secure approval of plans before construction begins. Similar recommendations are made by the Indiana (report by General Education Board) and Mississippi surveys.

In the survey of Marysville Union High School in California it was found that the present school plant is inadequate for carrying out the kind of school course that Marysville needs and is able to pay for. Because of this condition it is recommended that the school district take immediate steps by floating a bond of \$400,000 to initiate a program of physical development to put into effect a modern school course.

The report of the school survey of Fort Lupton, Colo., shows that the present school building scores 415 on a 1,000 point scale. Since the district can afford good school buildings, it is advised that it bond itself for whatever expenditures are necessary in order to care for the school's steady and rapid growth.

The Georgia survey shows that the one-teacher buildings in some counties are standard, while in others they are poor. Of the 4,500 one-teacher school buildings found in Indiana at the time of the survey made by the General Education Board, about 900 were discovered to be well fitted for the conduct of a good one-teacher school.

Of the 45 one-room buildings scored in Lackawanna County, Pa., many were found to be at least 50 years old and poorly equipped and lighted. Some were more than 50 years old, but have been remodeled to meet modern ideas of schoolhouse construction. Several

stand on plots of ground in crossroad corners scarcely larger than the buildings. All buildings were scored on the building score card designed by the State department of public instruction. It is recommended that the poor buildings be remodeled to conform with commonly accepted standards of lighting, heating, and sanitation.

The school plants of Porto Rico touch the extremes of magnificent and miserable housing. The municipalities show the best buildings and the rural areas the poorest.

Great contrast was found in the school buildings of Oconee County, S. C. Some are modern in every respect, while others are of the most primitive one-teacher type.

Consolidation.—In practically all of the surveys consolidation is recommended where feasible, and future building programs are considered in their relation to progress in consolidation. One of the purposes in making building surveys in Lackawanna County, Pa., and also in the State of Wisconsin was to determine where consolidation might be feasible. The Wisconsin survey recommends that school districts and counties with buildings showing low scores defer building programs until the matter of consolidation can be studied thoroughly.

Surveys of Indiana (survey by General Education Board), Mississippi, Utah, and Porto Rico show that considerable progress has been made in consolidation. In Indiana about 4,000 one-teacher schools have been abandoned since 1890, and others are being abandoned at the rate of 250 a year. The best rural school buildings are the consolidated schools erected since 1910. In 1909 consolidated schools were practically unknown in Mississippi, and rural school buildings were chiefly small, inadequate one-room structures. In 1925, when the survey was made, more than 67 per cent of the white rural school population were housed in new, well-constructed school buildings. Consolidation among the colored schools was nearly as great.

Inasmuch as the small common-school district as the local unit has been discontinued in Utah, one of the chief obstacles to developing effective building units of the consolidated type has been eliminated. Some of the recommendations of the survey staff are concerned with transportation of pupils and the location of consolidated schools. In a State in which consolidation has been developed as rapidly as it has in Utah it is inevitable that some mistakes should have resulted. The survey staff feel that future construction of buildings should be preceded by a careful survey of building needs made under the direction of a State school building supervisor. Consolidation has been encouraged in Porto Rico and has developed at a rate that would be considered rapid in the States. The number of consolidated schools increased from 96 in 1920 to 300 in 1925.

Teacherages are favored in some reports in connection with consolidated-school plants. Three hundred and thirty teachers' homes were found in connection with consolidated schools in Mississippi. District-owned teachers' homes in Texas increased nearly 31 per cent in the four-year period 1918-1922. A teacherage in connection with every school with more than one teacher in Caldwell County, Tex., is recommended in the survey of that county as an inducement for married men to remain in the teaching profession.

Term and attendance.—In discussing the extent of school facilities available for children the Texas survey report says that consideration should be given to both the length of the school year available to the children and the extent to which it is utilized. It is assumed that, within reasonable limits, the longer the school year and the more regularly children attend, the more school work they will accomplish.

In Arizona the minimum length of term reported was eight months. The Indiana survey (rural education survey committee) emphasizes that the minimum teachers' wage law in that State acts as a practical incentive to make the school term at least 8 months because the annual teacher's salary must be at least \$800, even though the school term may be less than 8 months. The surveys of Missouri and Texas report variations of rural school terms as follows: Missouri, from less than 4 months to more than 8 months; Texas, less than 3 months to more than 9 months. Practically one-third of the white rural schools of Texas were found to have a school term of approximately 6 months. One of the recommendations for the improvement of schools for negroes in Texas is a longer school term.

The extent to which the rural schools are utilized is indicated in data showing the percentage of enrollment to school census and the percentage of attendance. The enrollment in the primary schools in the Philippine Islands is only one-third of the total population of the children of primary-school age. The county districts of Utah have been enrolling a larger per cent of their school population than have the city districts, but the percentage of increase from 1900 to 1925 has been greater in the city districts. In 1900 the county districts enrolled 86 per cent of the school population and the city 77 per cent; in 1925 the county districts enrolled 96.8 per cent and the city districts 96.1 per cent. The Texas State survey shows that the percentage of attendance is lower for rural than for urban schools.

The teaching staff.—Practically all of the surveys, except those whose scope of inquiry is limited to a particular problem, such as finance or school buildings, investigated with considerable care certain questions concerning the teaching staff of the rural schools.

These investigations relate to the relative numbers of men and women teachers, their training, experience, and salaries. Facilities furnished by the various States for the preparation of teachers are given consideration in most of the State surveys. Of the 234 men teachers in rural elementary schools in Utah, 12 are in one-teacher schools and 204 in two or more teacher schools. The percentage of men in elementary-school positions in Utah is exceeded in only five States of the United States—Arkansas, 32.7; West Virginia, 30.5; Mississippi, 26.3; Kentucky, 25.2; and Indiana, 23.1.

Ninety-four per cent of the teachers in one-teacher schools in Arizona have four years of training above the elementary school. The average number of weeks training above high-school graduation of teachers in one-room rural schools in Indiana (report of survey committee) is 36, which is the legal minimum. Fewer than one-half of the teachers in one-teacher schools and slightly more than one-half of those in three-teacher schools in Utah have had the two years of professional training above high-school grade which is considered the standard amount of preparation necessary for elementary-school teachers. In 1923, 15.2 per cent of the rural teaching force in Missouri had no high-school training and only 57 per cent had more than four years' high-school preparation. In Logan County, Ohio, it was found that 88.7 per cent of the rural elementary teachers had less than two years of training beyond high school. Urban teachers in Porto Rico excel rural teachers in both academic preparation and experience.

Definite data on experience are found in a few of the 30 surveys. The median experience of the elementary teacher in Arizona was 6 years. In Missouri the median experience of the rural teacher was 2.7 years; of the city teacher 6 years. The median number of years of teaching experience for teachers in the county school districts in Utah was 3.3 years; in city school districts 6.3 years.

Considerably more than one-half of the one-room rural teachers in Indiana (report of the survey committee) received approximately the minimum annual salary of \$800 a year in 1923. A comparison of average annual salaries for rural teachers in one-half the counties of Missouri, with teachers in 50 per cent of the cities of that State, shows: Counties, \$562.50; cities, \$786.22. The median annual salary of teachers of one-room schools in Utah was \$817; in city schools \$1,384. The median annual salary for the white women in the one-teacher schools of Texas was \$608; in the two-teacher schools \$627; in the four or more teacher schools about \$727. Men teachers in the smaller schools of Texas received about \$100 a year more than women teachers. It was found in the Utah survey that in the one-teacher schools there was little difference between the salaries of men and

women teachers. In the other types of rural schools men received slightly higher salaries than women.

Most of the State surveys recommend better facilities for the preparation of rural teachers. The Mississippi and Texas surveys say that rural-teacher training departments should be organized in the teachers' colleges in each of these States. The Utah survey recommends that both the State university and the agricultural college in that State cooperate with the State department of education in the improvement of teacher-training work, especially in developing courses for State and county administrative school officials. Utah is among the few States in which teacher training is provided in connection with State schools other than normal schools or teachers' colleges.

"SUPERVISION OF INSTRUCTION

Many defects in rural education are attributable directly to the lack of adequate supervision. There is scarcely a problem of instruction in rural schools which is not affected by supervision. Reports of recent rural-school surveys have done much to focus attention upon this fact. Twenty-three of the surveys under discussion analyzed the rural supervisory problems with regard to such questions as the State's part in supervision, the method of selecting superintendents, numbers provided, and their training. Conclusions based on such data as scores on testing programs, age-grade tables, time allotted to the various school subjects, and training of teachers obtained in these surveys and appearing in the reports, show convincingly the value and the need of supervision.

Not only were the provisions for rural school supervision critically analyzed in the various surveys but constructive criticism was offered in most cases. In drawing their conclusions, surveyors usually define the purpose of supervision, thus contrasting what is with what should be. The following definition from the Missouri survey report is typical:

"The fundamental purpose of supervision is to give children a better education by improving the work of teachers while in service." Supervision helps the poor teacher to become a good teacher and the good teacher to become a better teacher. A supervisor should give demonstrations of good teaching, aid in lesson planning, show teachers how to improve teaching, advise with teachers concerning the best ways to handle children of different types, and show where and how to find good teaching materials."

In offering suggestions for the improvement of rural school supervision most surveyors assert that State oversight of this service is essential if it is to function to the best advantage, and recommend

¹⁷ Missouri Department of Education. Facts Concerning Public Education in Missouri. P. 43.

that State departments of education should take a leading part in the supervisory program. As indicated by the preceding sentence, conclusions reached by the surveyors embody certain general principles to follow in outlining supervisory programs. In the Utah report these principles are designated "Minimum Essentials for an Efficient State Supervisory Program." The list follows:¹⁸

1. Adequate standards for supervisors: (1) Of training and experience set up by the State's certifying service; (2) of personality, leadership, organizing, and administrative ability set up by the employing agencies, namely, superintendents and boards of education.
2. Definite agreement concerning the lines of authority and responsibility of supervisory officers, State, and county district superintendents, State and county district general and special-subject supervisors, principals, and teachers.
3. Adequate educational objectives set up and understood.
4. Well-organized plans and programs of work to meet the need of the schools, both long term covering a period of years, and immediate covering current problems.
5. Teachers initiated into the available help they may expect from supervisors and held responsible for profiting by such proffered assistance.

The report states that the greatest of the enumerated needs in Utah are those calling for higher standards for supervisory officers and for improvement in the quality of the service.

The legal and administrative provisions for supervision are discussed in a number of studies. Reports of surveys in States in which county superintendents are elected by popular vote uniformly criticize this method as unsatisfactory. The following are typical of these criticisms:

The present political form of county organization can not supply the type of professional supervision needed to secure the best results in rural school education * * *. The teachers under present conditions work with little supervision and guidance.¹⁹

To obtain efficient leadership in county educational affairs the office of county superintendent must be put on a strictly professional basis and must carry a salary in keeping with its dignity and importance. The county superintendent's task is certainly as important as that of the city superintendent; he should, therefore, be compensated as fairly. To interest well-trained and experienced men, the office should pay not less than \$3,000 annually, with fixed annual increments for continued service up to \$3,600 a year. As soon as county boards of education pay more, they can demand more. To be prepared for their work, county superintendents should at least be college or normal-school graduates (four-year course) and should have, in addition, at least one year's graduate work specializing in supervision and rural administration and five years' experience in public-school work. Such qualifications will not only insure efficiency, but will also safeguard the office against personal favoritism and local intrigue.²⁰

¹⁸ Survey of Education in Utah. United States Bureau of Education Bulletin, 1926, No. 18. P. 220.

¹⁹ A Survey of the Arizona Public-School System, 1925, p. 46.

²⁰ Public Education in Indiana. General Education Board, 1923, pp. 204-205.

The Texas law provides that in counties of fewer than 3,000 scholastics, unless provision has been made for the election of a superintendent of schools, the county judge shall serve ex officio in this capacity. At the time of the survey (1923-24) there were 100 county judges serving 102 of the 253 counties of the State in this capacity. In other counties the superintendents were elected by popular vote.

Of the ex officio superintendency the report states:

In the judgment of the survey staff, the showing of the elected county superintendents is not so good in this respect as is to be desired, but their status is distinctly superior to that of the ex officio superintendents. * * * Provision should be made at once for a material reduction in the number of ex officio county superintendents in all counties having as many as 25 teachers in common-school districts.²¹

In Utah the superintendents are appointed by the county district boards of education. The surveyors commend this method and state that the administrative organization provides the necessary machinery for the employment of professionally trained supervisory assistants to the superintendents, wherever the financial burden can be met locally.

The different State surveys have established by evidence that relatively few professionally trained supervisors are employed in rural school systems, and that therefore the supervision of these schools is mainly of a nonprofessional type. Survey reports state that the number of rural teachers a supervisor can effectively assist depends upon local conditions, such as roads, distances, and types of schools, to such an extent that the exact number is a problem for the local school officials to decide after careful study. Surveyors agree, however, that a supervisor should be provided for approximately every 30 teachers.

The report of the Philippine Islands survey calls attention to the difficulties encountered in establishing the present school system in those islands which necessitated the development of an effective supervisory program. A sampling of the number of teachers per supervisor in the report shows from 34 to 61 in the different divisions studied. The number apparently is not great, but it is noted that much territory must be covered, in many instances over extremely bad roads. In addition to the handicap of great distances to travel, Philippine Islands supervisors have a large amount of clerical work, which takes much of their time.

In the Indiana survey not one professional assistant to a county superintendent was found, and 20 superintendents had no clerical help. The report recommends:

Every county superintendent should have at least one stenographic and clerical assistant; * * * this would free the superintendents from clerical

²¹ Texas Educational Survey Report. Educational Achievement. P. 34.

details which now consume a large part of their time, to the consequent neglect of important administrative and supervisory duties.

Well-trained county superintendents will labor to little purpose, and classroom work will continue to be extremely unsatisfactory unless provision is also made for proper supervision, particularly of beginning teachers. It should be made mandatory upon each county to provide at least one supervisory assistant, whenever qualified superintendents are in charge, for it would be a waste of money to put a trained and experienced supervisor under an untrained superintendent. One supervisor in each county could not possibly do all that should be done, but she could do much to improve the schools, particularly if her major attention is given to beginning teachers.²²

The Utah survey report states that there was evident belief in the value of supervision as shown by the fact that in the State department of education, in the city districts, and in 16 of the 35 county districts, general or special supervisors or both were employed. For the State as a whole, the staff of supervisors was found inadequate in number. Some districts had none; others had altogether too few supervisors or supervising principals.

Evidence found in the Texas survey convinced those making the report that in many respects the country child was not given an educational opportunity equal to that provided the city child. It was stated that a high type of professional supervision would materially assist in reducing the disparity, and that wherever a superintendent has more than 50 teachers under his supervision he should have the assistance of a helping teacher or assistant supervisor for each 50 teachers or major fraction thereof.

The Missouri report states:

The conviction is fairly prevalent among rural teachers, county school officials, and the educational leaders in that State that the right type of constructive supervision is necessary for our isolated rural schools as they now exist. Recently one of our leading county superintendents in Missouri resigned his office because it was impossible, in his judgment, for any man to do properly the administrative, clerical, and supervisory duties now demanded of his office.²³

MEASURING INSTRUCTION

During the last two biennial periods standardized tests were used extensively in rural-school surveys. This means of appraising the educational output of rural schools seems to have found a definite place in critical studies of schools of this type. Seventeen of twenty-seven surveys in which instruction was studied made some use of objective tests and five of the remainder made extensive use of age-grade distributions.

The tendency to secure intelligence ratings of pupils in rural school surveys, in addition to their educational scores, is growing.

²² Public Education in Indiana. General Education Board, 1923, p. 200.

²³ Facts Concerning Public Education in Missouri, 1924, p. 43.

This is particularly true when it is desired to make comparisons between schools or systems. Many directors of educational research consider it essential to know the intelligence ratings in order to make the widest use of ratings in educational tests. That is, in determining whether pupils are progressing through school according to their ability, intelligence, as well as educational scores are necessary. Both mental and educational tests were used in 5 State, 4 county, 3 district, and 2 insular surveys reviewed. In at least four surveys, standardized achievement tests were used with the mental and educational tests.

Testing programs in the different rural surveys reviewed vary in scope from the use of educational tests in selected subjects in one or two elementary grades to programs including exhaustive analyses of practically all grades. The number of pupils tested ranged from a small per cent of the total school population in some of the large surveys to 100 per cent in some of the smaller ones. In general, the testing programs were limited by time and funds to representative schools and grades; for the same reasons, selections of subjects were necessary in many surveys. With the limitations mentioned, the subjects were selected in accordance with the specific purposes of the respective surveys.

The Texas survey report cites the following reasons for selecting certain grades:

Grade V, primarily because, as shown by its frequent use in other surveys, it represents a stage far enough advanced to provide a fair test of what the school has done; Grade VII, because it represents in the State of Texas the last grade of the elementary school. While it was the purpose, therefore, to secure data primarily in Grades V and VII, tests were given in the rural schools to all grades above the second. It required little, if any, more time to test all grades above the second in the small rural school than it would have to test only the fifth and seventh.²⁴

The Utah survey report explains the selection of schools as follows:

Since neither the time nor the money was available to carry out a standardized testing program including every elementary school in the State, a "sampling" method was followed. Districts and schools were selected in such a manner as to include all kinds, thus securing a fair and accurate picture of conditions prevailing in the county school districts throughout the State.

Tests used in the different surveys included many of the well-known educational tests, including both elementary grades and secondary grades. Tests were given most frequently in the fundamental subjects, and the discussions of results invariably begin with the subject of reading, thus emphasizing the prominent place this subject occupies in all survey testing programs. The use of achievement tests in rural schools does not seem to be widespread, but these

²⁴ Texas Educational Survey Report, Educational Achievement. P. 24.

were used in a few instances in connection with educational or mental tests.

Facts shown by test results and age-grade tables served as bases, in 22 of the 30 surveys mentioned, for conclusions and recommendations relative to pupil classification, school organization, curricular offerings, supervision, and other instructional problems. In most cases comparisons were used freely in the treatment of test results. Scores of pupils in city school systems and the norms for the various grades are shown for comparative purposes. A number of reports show test results in the different types of rural schools surveyed.

Comparisons show that pupils in the rural schools made lower scores, grade for grade, in Arizona, Colorado, Indiana, Michigan, Ohio, Texas, and Utah than those in the city schools of these States; the reverse is shown to be true in the West Virginia survey report. Differences varied from very little to more than a year's progress. An extreme difference is noted in the following quotation from the Indiana survey:

Eighth-grade pupils in the city schools are about one and nine-tenths years ahead of pupils in one-teacher schools, and more than a year ahead of the pupils in the large consolidated schools and town schools.²⁵

That test results were put to practical use in arriving at conclusions is shown by this typical discussion concerning them in one survey:

Many causes suggest themselves. The average rural school teacher has not herself attended school so long as the average city teacher, and therefore is not so well prepared to teach; the rural teacher has more classes to instruct, and hence less time to devote to any one grade. The school year in the rural section is shorter than the school year in the cities. Rural attendance is not so regular. Rural schoolhouses are in general less well adapted and less well equipped for school work. These and other conditions militate against successful work in the small rural school.²⁶

The Texas survey report calls attention to the fact that when the relationship of achievement to capacity to learn is considered, rural pupils in some instances rank as high or higher than city pupils. This report also calls attention to the poor facilities for conducting rural schools as factors to be considered when comparing the results of instruction in these schools to the results in city school systems.

Age-grade tables appear in most rural school survey reports. These show the amount of acceleration, normal progress through school, retardation, and, used in connection with mental and educational ratings, pupil achievement. Reports of surveys in Arizona, Florida, Georgia, Texas, West Virginia, Kalamazoo County, Mich., Porto Rico, and the Philippine Islands show high percentages of retardation and low percentages of acceleration among pupils of rural

²⁵ Public Education in Indiana. General Education Board, pp. 19, 20.

schools. In the survey of the Logan County, Ohio, schools, high percentages of under-age and also over-age pupils were found in the one-room schools, but retardation was less than among the pupils of the one urban district in the county. The report of the Logan County study states: "The wise superintendent will not pass by facts such as are shown in the age-grade tables without looking very closely into the reasons for a large amount of retardation."²⁰ The Florida survey report gives as the reason for excessive retardation among rural pupils in that State, (1) short terms; (2) large classes and large numbers of classes; (3) poor teaching; and (4) lack of supervision.

Pupil classification is a subject frequently discussed in connection with test results in the survey reports examined. The surveyors found that standard tests were seldom used among rural schools. That more local use should be made of them for diagnostic purposes is included in nearly all recommendations. The Surface Creek survey report is an illustration:

The use of standard tests in the work of the schools should be encouraged for they have come to be a necessary part of the machinery of modern education. Their greatest usefulness is to be found within the schools themselves rather than in comparison of schools."

Although some of the best results of testing programs in rural-school surveys made during the period under discussion have been indirect ones, such as the training of many rural-school teachers and superintendents in the use of standard instruments for measuring teaching results, and calling attention to the relation of achievement of pupils to their intelligence, evidence of direct benefits are also at hand. The following quotation from the report of the West Virginia survey is an example:

On the basis of the results of the standard tests the teachers selected from the 1,675 pupils tested 276 pupils, or 16.5 per cent. * * * and promoted them the following Monday and Tuesday into the next higher grades, giving them a chance to show in the remaining two months of school whether they could do the work or not. At the end of the year the writer received a computed report from the various principals through the superintendent, indicating how these 276 pupils had fared. The report revealed that 260 of the number, or approximately 95 per cent, had made good and had been promoted again at the end of the year."

SUPPORT FOR RURAL EDUCATION

A considerable portion of the space of reports of State surveys of Arizona, Georgia, Indiana (both surveys), Mississippi, Missouri, Texas, and Utah is devoted to an analysis of the problem of financing

²⁰ McCracken, Charles C. Logan County and Bellefontaine, Ohio, School Survey. P. 20.

²¹ Manuel, Herschel T., and others. The Surface Creek Survey, p. 23.

²² Caving, L. V. School Survey of Type Counties of West Virginia, p. 56.

public-school education in elementary and secondary schools in rural communities. The survey of one State—Colorado—deals exclusively with the subject of public-school finance. A few of the county and school-district surveys discuss the subject. The chief factors considered by each of the surveys are: (a) The ability of the unit surveyed to support its schools; (b) sources of present funds, and (c) recommendations for improvement.

Ability to support schools.—Practically all of the surveys that treat the subject of school finance say that the units surveyed have wealth enough to adequately support the schools. This conclusion is usually arrived at by dividing the income and wealth or taxable property of the unit surveyed by the number of children to be educated. The Utah survey has the following to say concerning this method of measuring a State's ability to support its schools:

The most satisfactory measure or index of a State's economic resources would be one which combined into a single sum or index its wealth and its income. Economists are agreed that income is a more accurate measure of ability to pay than taxable wealth. It has therefore been deemed best in attempting to devise a measure or index of economic resources to combine only a certain per cent of a State's total wealth with its net current income. A combination which has been used from time to time, and which is perhaps as satisfactory a combination as can be devised, is one which uses current income plus one-tenth of wealth.

A recent bulletin of the National Education Association applies this measure or index to each of the 48 States as a means of determining their ability to provide school revenues. It also arranges and ranks the States on the basis of their economic resources per child 6-13 years of age. In addition to this it shows for each State the per cent of its economic resources that was actually expended for the support of public elementary schools and high schools. It will be seen that this per cent may be taken as a measure of the effort put forth by the respective States.²

The several surveys made an effort to point out the financial ability of the State or unit surveyed to support schools, generally by showing their relative per capita of school attendance wealth as compared with other similar units, or citing comparisons of expenditures for school maintenance with expenditures for tobacco, beverages, automobiles, etc.

Sources of present funds.—Public schools in rural communities receive their support largely from funds derived from the following sources: (a) Federal, (b) State, (c) local—county and school districts.

Federal funds contributing to the support of schools in the surveys discussed herewith consist of forest-reserve funds, the Smith-Hughes funds, and royalties derived from the Federal oil and mineral leasing act. Arizona, Colorado, and Utah all have large acreages

² Survey of Education in Utah. United States Bureau of Education Bulletin, 1926, No. 18. Pp. 398, 399.

of Federal forest reserves. However, money received from this source constitutes only a small percentage of total receipts for elementary and high schools in these States.

Surveys of Colorado and Utah give definite information concerning Smith-Hughes appropriations for vocational education. In 1926 the State of Colorado appropriated \$62,680 to match appropriations made by the Federal Government for expenditures for vocational education, in accordance with the provision of the Smith-Hughes Act, and \$10,000 for administering and supervising the work. During the school year 1924-25, Smith-Hughes subventions for vocational education were two-thirds of 1 per cent of the total receipts for the support of elementary and secondary schools of Utah.

Another source of Federal funds for the support of schools is provided by the Federal oil and mineral leasing act which provides that deposits of coal, gas, and other nonmetallic minerals in lands owned by the United States may, with certain exceptions, be leased to any association or individual for the purpose of exploiting the mineral products. The moneys received by the States are used for the support of roads and public schools. The Utah survey calls attention to the fact that of the 13 States receiving grants from the Federal leasing act, in all but two States—California and Wyoming—the sums received have been of negligible importance up to the present time. In discussing this source of revenue the Colorado survey says:

The interest of this act for Colorado lies in the possibilities of the discovery of mineral deposits of great value in the public domain located within the State which would thus become an important source of revenue to the State. It is not too soon to consider what should be the proper distribution of such a fund, and all those interested in education should see to it that the claims of education for a portion of it are properly presented to the legislature.^a

The Utah Legislature in 1923 enacted a law devoting the entire proceeds of funds derived from the Federal oil and leasing act to the principal of the State permanent school fund. Wyoming devotes 50 per cent of its revenue from this source to public schools, and is able from this fund to provide approximately \$250 a year for every elementary-school teacher and \$375 for every high-school teacher.

State funds for the support of schools are derived chiefly from income from permanent school funds and school lands, appropriations, and taxes. Incomes from permanent school funds and school lands represent a small per cent of the total revenues for public schools. Survey reports from Arizona, Colorado, Indiana (rural education survey committee), Missouri, and Utah show that incomes from these sources varied from 1.4 per cent to 7.1 per cent of the total.

^a Financing of Public Education in Colorado. University of Colorado Bulletin, vol. 24, No. 6. P. 86.

In most of the States the major portion of the funds contributed by the States for the support of schools is derived from appropriations and taxes. The school laws of Arizona provide that the State shall levy a tax sufficient to raise a sum amounting to not less than \$25 per capita for all children in average daily attendance in the common and high schools of the State. The Arizona survey shows that in 1922 this fund amounted to 24.2 per cent of the total revenue for the support of schools.

According to the Colorado survey, prior to the passage of the Smith-Hughes Act of 1917 that State had never pursued any continuous policy of making State appropriations for school support, and the only appropriation now made for common-school purposes is that necessary to receive and administer the Federal grant for vocational education under the provisions of the Smith-Hughes Act. Every State now makes appropriations for this purpose.

The constitution of Missouri requires the State to set apart annually not less than 25 per cent of the State revenue, exclusive of the interest and sinking fund for the support of the public schools. The survey of Missouri says in practice the general assembly sets apart one-third of the revenue for the support of public elementary and high schools. During the school year 1919-20 this appropriation amounted to 11.8 per cent of the total receipts for school support.

The Utah survey shows that during the school year 1924-25 more than 31 per cent of the total receipts for the support of elementary and high schools was derived from State taxes. The only special appropriations made at the present time are those for salaries and wages, office expense, travel of and equipment for the State board of education, and appropriations to match Smith-Hughes subventions.

The percentage of the total amount of school support (interest on permanent funds, appropriations, and taxes) derived from the State, as given in survey reports from Arizona, Mississippi, and Utah, are higher than in most States. These percentages are 28, 28.5, and 35.03, respectively.

Support for schools is derived chiefly from county and local school districts. The county as a source of school support is increasing in importance in the country as a whole. Surveys of Arizona, Colorado, Mississippi, and Utah indicate that the county contributes a relatively large percentage of the total revenue for the support of public schools. In Utah where, in most instances, the school district is the county, approximately 59 per cent of the total revenue for school support was received from county district funds in 1924-25. The Arizona survey points out that, while Arizona has been regarded as a State in which the county is utilized as the chief means of local support, the tendency since 1913 has been to decrease the percentage of the total funds derived from county sources; this decrease is shown

by the following percentages: 39.8 in 1915 and 32.9 in 1922. The percentage of total revenue from county funds given in the Colorado survey report was 21 per cent for 1922; that given in the Mississippi report was 23.3 per cent for 1925.

Surveys from Colorado, Indiana (General Education Board), Missouri, and Utah show that the chief burden of school support comes from the local districts. The percentages of the total given in surveys from each of these States were approximately 80, 90, 85, and 58, respectively.

Recommendations.—The recommendations concerning finances made in the surveys deal chiefly with changes in the methods of apportioning State school funds, units of taxation, new methods of taxation, and equalization funds.

All of the State survey reports and some of the county surveys recommend more equitable methods for distributing State school funds. In most of the surveys reviewed the basis for distribution is the school census. This method has long been regarded as unscientific. In discussing the methods that should be used the following quotation from the Colorado survey is reasonably typical of discussions on the subject found in other surveys:

The general conclusion of educational authorities on this subject is that no single basis of apportioning school funds will prove to be satisfactory, just, and equitable if used singly and alone, and that the best results can be obtained only by a combination of two or more bases. A combination of the teachers-actually-employed basis with aggregate-days-of-attendance basis, together with a distribution based upon the valuation, affords one of the best plans yet evolved for securing a just and equitable distribution of school funds.

By using the number of teachers actually employed as a basis of apportioning school funds, recognition is given to one of the most important elements to be considered in conducting a school, namely, the qualifications and ability of the teacher. The higher the salary a district can pay, the better qualified teacher it can secure. Furthermore, this plan places a premium on the employment of a sufficient number of teachers to teach the children properly and serves as a strong incentive to provide an adequate teaching staff. Used as the sole basis of apportionment it would fail to place a premium on such desirable education efforts as increasing the attendance and lengthening the school term.

Under the plan of apportioning school funds upon the basis of aggregate days of attendance the State pays communities for the actual numbers of pupils at school each day, with the result that a premium is placed both upon regularity of attendance and upon lengthening of the school term. It takes into consideration the various efforts which a community makes to secure these results. The State pays for each pupil in attendance and also for each day that the pupil has the opportunity to remain in attendance. If used alone this plan would give city schools an advantage over the small country districts by reason of the longer term of school and the much smaller number of teachers required for each 1,000 children.

The use of the school census for the apportionment of State and county school funds should be abandoned in Colorado as soon as possible, and a

combination plan adopted providing for the distribution of funds on the basis of the number of teachers actually employed and the aggregate days of attendance and the valuation of the school district. It might be desirable for the State to pay a fixed amount for each teacher actually employed and then apportion the remainder of the State fund on the basis of aggregate attendance and assessed valuation. It would also be desirable to set aside a certain "reserve fund or equalization fund" before making the above apportionment to be used for the relief of those communities which have made the maximum effort allowed by law and yet are unable to meet the minimum educational requirements of the State.²

In each of the surveys larger units of taxation are recommended. It is generally agreed in most of the surveys that the State should bear a larger percentage of the cost of maintaining schools than is the present practice, and that the county as a unit for taxation and school administration should be substituted for the small school district unit in States where the county unit does not now exist.

The Indiana survey (rural education survey committee) bases its recommendations for increasing the proportion of the burden of school support to be borne by the State as a unit upon the following two considerations:

(a) The recommendation already made for the use of the income and inheritance taxes for school purposes, which would necessarily involve the State as a unit for the distribution of these revenues.

(b) A consideration of the degree to which a larger use of the State as a unit for school revenue would reduce the inequalities of educational opportunity now afforded by the various school corporations of the State.³

The Missouri survey says that the county unit of taxation would help equalize the burden of support and the educational opportunity within each county, but this will have to be supplemented with State aid in order to equalize the burden of support and the educational opportunity among the counties.

Surveys of Colorado, Indiana, Mississippi, Missouri, and some others say that the general property tax as the sole source of school revenue is condemned by authorities in the field of taxation. They recommend that it be reduced and supplemented by such newer methods of taxation as State income taxes, inheritance taxes, taxes on corporations, and severance taxes.

The Colorado survey shows that more than 71 per cent of the local taxes come from farm lands, city real estate, livestock, and miscellaneous personal property; corporations, banks, and manufacturers pay 24 per cent; while taxes from intangible property constitute less than 2 per cent of the total. A study of the net income, reported by

² Financing of Public Education in Colorado. University of Colorado Bulletin, vol. 24, No. 6, 1924, pp. 72, 73.

³ Report of the Indiana Rural Education Survey Committee, Indianapolis, Ind., 1926, p. 113.

individuals and corporations in Colorado making income tax returns to the Federal Government in 1920, indicates that millions of dollars of intangible property in Colorado are not being reached by the present system of taxation. Individuals securing incomes from salaries, professional earnings, and investments in securities go practically untaxed.

The Indiana survey (Indiana rural education survey committee) in addition to recommending a State income tax for school purposes suggests the diversion of a part or all of the inheritance tax into the common State school fund. The Mississippi survey recommends that luxuries and nonessentials be taxed for school purposes.

The Porto Rico survey says that expansion of school facilities depends upon either tapping new sources of revenue, or making greater sacrifices, or diverting additional funds from present channels, or some contribution resulting from these factors. The rural areas merit greater financial consideration than the facts indicate they have received in the past.

The necessity of some type of State equalization fund is recognized in a number of the surveys. The Mississippi survey report says that the equalizing school fund in that State is essential and in course of time should be increased. The Missouri survey recommends that the amount of State aid be increased appreciably if not doubled.

Three-fourths of the school revenues of the Philippine Islands are supplied by the insular government. The survey states that in 1920 the Philippines had a far sounder policy of distributing this aid than they have at present. It recommends that the 1920 rules be adopted until a special study of insular aids can be made. Such a study should take into account the effects of these aids in stimulating local endeavor and in equalizing educational opportunity and educational tax burdens.

For the purpose of equalizing educational opportunities in Utah the survey report proposes as the minimum program to be guaranteed to every child by the State, the cost of which is to be equalized by means of a State equalization fund, such a program as can be secured by expending for current expenses—for support and maintenance alone—\$70 per child in average daily attendance. Three plans for financing this program are proposed, with preference given to plans 1 and 2.

Plan No. 1. The simplest and most equitable way for equalizing educational opportunities and school burdens would be for the State to pay all the cost of the minimum program and to levy a State tax which would produce funds sufficient, when added to all other State funds, to pay all costs.

Plan No. 2. If Utah is not prepared to adopt a plan of complete State support or of having the State provide all funds except those required to meet the costs of capital outlay and debt service, it may, nevertheless, greatly improve its present situation by establishing, in addition to all existing State funds, a State equalization fund to be distributed in such a manner as to equalize revenues and district school burdens.

In order to share in the State equalization fund, every district shall levy a tax of a rate equal at least to that which the wealthiest district will be obliged to levy to provide said district with funds which, together with the moneys received from the State district school fund and all other existing State funds, will be sufficient to pay the total cost of providing the minimum program in this district without aid from the equalization fund. The rate which this wealthiest district levies becomes, in effect, a compulsory minimum tax rate to be levied by every district in the State.

Plan No. 3. This plan proposed that one-half of the combined income of the land interest and rental fund and the State district school fund shall be apportioned among the districts on the basis of average daily attendance, and that the remaining half shall be set aside as an equalization fund to be apportioned among all districts which levy a tax of a minimum rate and are unable from the proceeds of this tax and from all other State funds to provide for each child in average daily attendance an amount equal to the State average expenditure per pupil in average daily attendance during the preceding year. This proposal is only offered as a last resort.

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